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TABLE OF CONTENTS

	PAGE
EFFECT OF CIGARETTE SMOKING ON EXCRETION OF UROPEPSIN AND CONCENTRATION OF PLASMA PEPSINOGEN, <i>Philip Cooper, M.D., Harold L. Stein, M.D., Goldwyn F. Moore, B.S. and Harold W. Harrower, M.D.</i>	215
THE DIAGNOSIS IS CANCER — THE DOCTOR SPEAKS, <i>Thaddeus A. Krolicki, M.D., F.A.C.S.</i>	217
WHIPLASH INJURIES, <i>A. A. Savastano, M.D., and Donald F. Larkin, M.D.</i>	220
USE OF A FOOD PUMP IN G.I. DISORDERS AND IN PSYCHIATRIC- SURGICAL AND CHRONIC DISEASE STATES, <i>Raymond E. Moffitt, M.D.</i>	223
17th ANNUAL CONGRESS ON INDUSTRIAL HEALTH, A Summary Report	226
HIGHLIGHTS OF THE 53d ANNUAL CONGRESS ON MEDICAL EDUCATION AND LICENSURE	232

EDITORIALS

Tobacco and Lung Cancer	229
More Medicare	230
Stress	231
New York In June	231

DEPARTMENTS

The Woman's Auxiliary	198
The Washington Scene	206
District Medical Society Meetings	242
Through the Microscope	244
Book Reviews	246
Index of Advertisers	252

THE WASHINGTON SCENE

A summary of Washington news prepared by the Washington Office of the American Medical Association

IF ANY large-scale health and medical program is to be pushed through Congress this year, most of the pushing will be done by the Democrats, who, in control on Capitol Hill, can get what they want, in theory at least.

Announcing that the idea of a special presidential health message had been dropped for this year, Secretary Folsom also said the Republican administration would press for only three major health-medical bills. All three, incidentally, were before Congress last year but were not acted upon. They are:

1. Federal assistance to medical, dental, and public health schools to help them build and equip new teaching facilities or improve and expand existing classrooms or labs.

2. Waiver of the anti-monopoly laws to permit small companies (none doing more than one per cent of the total business) to pool some of their funds for experimental work in expanding voluntary health insurance.

3. Authorization for construction of sanitary facilities on Indian reservations.

In outlining these legislative objectives of the administration, the Secretary took the opportunity to make clear he doesn't think much of one bill that has the ardent support of some Democrats and of some labor leaders. It would have the U.S. pay for 60 days' free hospitalization annually for persons age 65 and over who are under social security, and their dependents if also over 65.

Mr. Folsom said the social security administration has all it can do administratively to put into effect the major amendments passed last year, and that besides the "hospitalization at 65" plan skirts so close to the area of compulsory health insurance that it should be regarded cautiously.

The Medicare Program

The Army's Office of Dependent Medical Care, handling the new program that offers private medical care to service families, is working on some long- and some short-range plans of importance to state societies.

To meet a problem coming up in the next few months, the office is notifying states that contracts for physicians' services, negotiated through the

state societies last fall, will be extended automatically when their expiration date of July 1 arrives. However, there is no definite time period set for any of the extensions; each contract will be continued in effect until that particular state's agreement has been renegotiated.

When the contract is extended, according to Maj. Gen. Paul I. Robinson, head of the Office of Dependent Medical Care, it will be possible to make necessary adjustments, but he hopes not too many changes will be asked at that time.

Then, after July 1, each state will be given 60 days' notification before Defense Department makes its final audit covering the period from December 7, 1956, when the program went into effect, through June 30, 1957. This audit has been promised in each state before renegotiation starts.

Both the state fiscal agents and Gen. Robinson's staff should be well prepared for renegotiations when the time arrives. No renegotiations will be undertaken until January, 1958. They will continue for most of next year, on a tentative schedule that calls for handling about five contracts per month.

Notes

A House committee, making a survey of the cost of veterans' programs, has been asked by VA Administrator Harvey Higley to ponder this question: Should more VA hospitals be constructed when we know beyond doubt that they will be largely for the benefit of non-service-connected cases?

* * *

As anticipated, pressure already is on Congress to drop or lower the age 50 limit for OASI payments because of disability. Many bills have been introduced on the subject.

* * *

Congressmen are hearing again from the friends of the "Hoxsey cancer cure," which has been under constant attack by Food and Drug Administration but still manages to stay in business. Form cards, carrying space for a name and address, are being received on Capitol Hill, each asking Congress to investigate FDA for the way that agency has pressured the Hoxsey people.

EFFECT OF CIGARETTE SMOKING ON EXCRETION OF UROPEPSIN AND CONCENTRATION OF PLASMA PEPSINOGEN*

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Introduction

IN A STUDY conducted at this laboratory it was found that, under the conditions employed, the smoking of cigarettes by patients with duodenal ulcer did not produce significant changes in the volume, pH, "free acid," peptic concentration or peptic output of gastric secretions.¹ To further evaluate the influence of cigarette smoking, the excretion of uropepsin and the concentration of pepsinogen in plasma were measured in a group of habitual smokers during and after a period of abstinence. The concentration of plasma pepsinogen in individual subjects is fairly constant from day to day, is not altered significantly by usual variations in diet or activity, and its laboratory determination is reliable.^{2,3} Since pepsinogen in plasma is a precursor of uropepsin, dual determinations were accomplished to supplement and check one another.

Bornstein and Eichen⁴ reported that the average excretion of urinary pepsinogen of habitual smokers is 43 per cent higher than that of nonsmokers.

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*Supported in part by a grant from the Tobacco Industry Research Committee.

Clinical Material

The study group consisted of twenty adult male volunteers, all patients at the Providence Veterans Administration Hospital. Patients ranged in age from twenty-two to sixty-five years; average 34.1. All patients were cigarette smokers. Patients were in the hospital for a variety of general surgical, orthopedic, neurosurgical and neurological conditions. Patients accepted for study were free of any symptoms or signs suggestive of gastrointestinal disease, cardiac decompensation, or urological difficulties. Urinalyses and blood urea nitrogen values were normal in all instances.

Methods

The observation period was thirteen days. Patients stopped smoking at 10:00 P.M. on the first day and resumed smoking after 10:00 A.M. on the sixth day. Blood pepsinogen determinations were performed on the second, third, fourth, and fifth days (nonsmoking), and on the ninth, tenth, eleventh, and twelfth days (smoking). All blood specimens were drawn at 10:00 A.M. The excretion of uropepsin was measured in twenty-four-hour urine collections (10:00 A.M. to 10:00 A.M.) on the third, fourth, fifth, and sixth days (nonsmoking), and on the tenth, eleventh, twelfth, and thirteenth days (smoking).

During the period of the study no effort was made to regulate diet or fluid intake. None of the patients received autonomic or steroid drugs or other medications which could affect the peptic activity of the stomach or renal excretion.

From the sixth to the thirteenth day of the study patients smoked at their usual rate, their own brands of cigarettes. They were instructed to smoke three quarters of the length of each cigarette and to maintain a record of the number of cigarettes smoked per day. The average daily number was 22.3 cigarettes. Most patients smoked regular size cigarettes, and only two smoked the filter-tip variety.

Plasma pepsinogen levels were determined by the method of Mirsky and his co-workers,⁵ as

continued on next page

modified by Spiro, Ryan and Jones.² Uropepsin excretion was determined by the method of Anson,⁶ Bucher,⁷ and Mirsky,⁸ as modified by Spiro and his associates.⁹

Mean values for plasma pepsinogen concentration and the excretion of uropepsin were calculated for each patient during the nonsmoking and smoking periods, respectively. These numerical data were subjected to statistical analyses by the determination of mean differences and their standard errors. The "t" test of Fisher was applied and a P value of 0.05 or less was considered significant.

Results and Conclusions

Mean values for the concentration of pepsinogen in plasma and the excretion of uropepsin, and the numerical differences between these values, for each patient, nonsmoking and smoking, are shown in Table I.

TABLE I
Average daily excretion of uropepsin and concentration of plasma pepsinogen in twenty patients during a period of cigarette smoking (S) and during a period of abstinence (NS)

Patient	Average Uropepsin Excretion			Average Plasma Pepsinogen Concentration		
	NS	S	Diff.	NS	S	Diff.
1	5226	5043	-183	593	616	+23
2	2512	2683	+171	696	660	-36
3	3283	1657	-1626	472	435	-37
4	5336	3635	-1701	492	461	-31
5	5124	3090	-2034	421	411	-10
6	7288	6771	-517	737	686	-51
7	4565	2991	-1574	437	379	-58
8	6529	6815	+286	543	547	+4
9	2258	4305	+2047	518	484	-34
10	6079	2240	-3839	400	414	+14
11	1113	3027	+1914	183	179	-4
12	10508	9011	-1497	856	841	-15
13	5303	8772	+3469	556	498	-58
14	9601	8646	-955	712	722	+10
15	4527	3403	-1124	443	445	+2
16	3220	2682	-538	371	342	-29
17	8386	7388	-998	548	533	-15
18	3880	4667	+787	494	440	-54
19	912	1286	+374	409	396	-13
20	5367	4322	-1045	490	499	+9
Mean Diff.	-429.15			-19.15		
*S.E. of Mean Diff.	367			5.67		
Fisher "t"			3.377		
Probability (P)			0.003		

*S.E. = Standard Error

The mean difference in the excretion of uropepsin during the nonsmoking as compared with the smoking period was -429 ± 377 units and obviously does not represent a statistically significant change. Indeed, in some patients, variations in the excretion of uropepsin from day to day during

either test period exceeded this amount. Accordingly, no conclusions can be drawn regarding the effect or lack of effect of cigarette smoking on the excretion of uropepsin under the conditions of this study.

The mean difference in the concentration of pepsinogen in plasma during the nonsmoking as compared with the smoking period was -19.15 ± 5.67 units; a small but statistically significant decrease ($P = 0.003$) in the pepsinogen level during the smoking period (Table I).

All uropepsin excretion determinations were plotted against corresponding plasma pepsinogen levels for the nonsmoking and smoking periods, respectively (Figure 1). Uropepsin excretion is

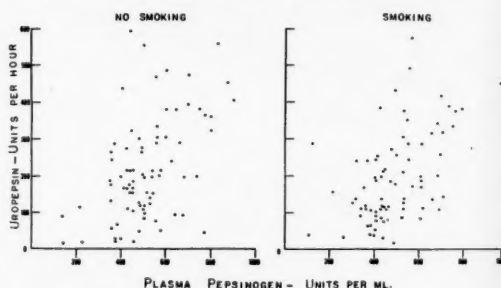


FIGURE 1

Daily uropepsin excretion plotted against corresponding plasma pepsinogen concentration for twenty patients during a period of smoking (four days) and during a period of abstinence (four days).

expressed as units per hour, and plasma pepsinogen concentration as units per cc. It is evident that the relationship between uropepsin excretion and plasma pepsinogen concentration is roughly linear.

SUMMARY

In a study group of twenty patients without evidence of gastrointestinal, cardiac, or renal disease, it was found that cigarette smoking after a period of abstinence produced a statistically significant decrease in the concentration of plasma pepsinogen.

Uropepsin excretion determinations in this study on the same group of patients varied so widely that no conclusions relative to the effect or lack of effect of cigarette smoking could be drawn.

BIBLIOGRAPHY

- Cooper, P., and Knight, J. B.: Effect of cigarette smoking on gastric secretions of patients with duodenal ulcer, *New England J. Med.* 255:17, 1956
- Spiro, H. M.; Ryan, A. E., and Jones, C. M.: The utility of the blood pepsin assay in clinical medicine, *New England J. Med.* 253:261, 1955
- Hoar, C. S., Jr., and Browning, J. R.: Plasma pepsinogen in peptic ulcer disease and other gastric disorders, *New England J. Med.* 255:153, 1956
- Bornstein, S., and Eichen, S.: Influence of smoking on urinary pepsinogen excretion, *Proc. Soc. for Exper. Biol. & Med.*, 86:619, 1954

concluded on page 251

THE DIAGNOSIS IS CANCER — THE DOCTOR SPEAKS*

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A DIAGNOSIS of cancer, once announced, has myriad and far-flung consequences. The psychological impact on the patient of the very word "cancer" is so frightening to most patients that even in definitely curable cases a barrier is often set up that interferes permanently with satisfactory rehabilitation.

Many physicians themselves, unfortunately, seem to share with their patients this almost superstitious fear. The slightest doubt, the tiniest fear, in the physician's attitude seeps into his face or his voice and is immediately transmitted to the patient, doing irremediable damage. We want to educate the public to a respectful awareness of cancer, but not to an unreasoning dread of the disease. Let us start with ourselves, then, and wipe doubt and ignorance and dread from our own hearts. It is tragically true that complete cures in cancer patients are not as frequent as we all wish, but the picture for the future becomes steadily more hopeful, and it is this hopefulness, and only hopefulness, that we must transmit to our patients.

No patient is cured if his physical ailment is nullified and his cancer removed while he remains or becomes an invalid because his mental attitude is impossible of rehabilitation. A patient is cured only when he again attains his original level of activity and personality. Rehabilitation is concerned not only with physical repair, but also with the restoration of the total function of the individual. I agree with Doctor Arthur M. Sutherland¹ of the Department of Rehabilitation and Psychiatry of the Memorial Center for Cancer and Allied Diseases, in New York City, when he states that "unsuccessful attempts at rehabilitation of the cancer survivor are more often due to his psychological and emotional problems than to physical and environmental factors."

The survivor of cancer who fails to attain his previous level of activity in any area, work, recre-

ation, or even marriage, is insufficiently or unsuccessfully rehabilitated. Doctor Sutherland believes that when work, either gainful employment for men and women, or housework for women, is restricted for other than physical reasons, two main sources can usually be identified:

1. Hypochondriac notions of body injury and fragility.
2. Fears of unacceptability to others.

The notion of body injury is usually accompanied by a sense of fragility: "I treat myself like a soft-boiled egg, liable to break its shell at any moment." There is also a sense of loss of energy, or lessened *élan vital*, which must carefully be husbanded to meet the inescapable demands of living. The sense of loss of energy and fragility is accompanied by the notion that the body has been rendered more vulnerable to other diseases, and, notably, to recurrence of cancer. This attitude is often reinforced by beliefs that previous hard work or energy expenditure has been responsible, at least in part, for the development of cancer. Patients with such beliefs are reluctant to re-enter situations perceived as dangerous. Therefore, the hypochondriac response is frequently signaled by requests for part-time work, or work under special conditions that serve the purpose of shielding the individual from dangerous expenditure of energy.

The sense of body injury is supported by misconceptions of the physiologic role of the sacrificed organ in the intact body. A number of patients who have undergone a colostomy state that the loss of the rectum must inevitably affect their digestive or absorptive powers, or that irrigation washes out nourishment as well as feces.

Loss of the uterus and menstruation, with or without oophorectomy may herald old age and depleted vitality in the patient's mind. Loss of the pectoral muscles and axillary contents by radical mastectomy gives rise to beliefs of injury to the subjacent intrathoracic contents, notably the heart, after left mastectomy.

Any postoperative complications, such as phlebothrombosis or bronchopneumonia, may also strongly reinforce beliefs of body injury. Wound dehiscence after mastectomy rather regularly intensifies hypochondriac responses. Complications

continued on next page

*Read at the meeting of the Providence Surgical Society, at Providence, Rhode Island, January 23, 1957.

are sometimes ascribed to uncontrolled or recurrent cancer. Somatic responses to emotion, such as anorexia, insomnia, tachycardia and palpitation, commonly seen in depressions or anxiety states, and conversion phenomena may also be misinterpreted as evidence of debilitation or recurrent cancer.

Beliefs of unacceptability to others, predicated on self-rejection, limit work because most employment requires social interaction. Withdrawal from others realistically limits job opportunities. Relations with other workers and the employer may be strained by development of paranoid trends. Continuing at work may lead to anxiety and consequent psychosomatic symptoms.

Restriction in social contacts is frequently due to a sense of unacceptability to others who are not expected to accept the change in form, as after mastectomy, or the possibility of uncontrolled function, such as occurs after colostomy. Should any untoward event take place, massive rejection and condemnation are expected. For example, patients who have undergone a total gastrectomy fear that intestinal hypermotility may be audible and cause embarrassing symptoms. Or, frequently weight loss following total gastrectomy leads to social withdrawal because one is unacceptable if one looks sick.

Decreases in sexual activity may also be expressive of emotional disruptions. In men, when the hypochondriac reaction is responsible for restriction of sexual function, it appears shortly after surgery and occasionally in anticipation of it. It may follow operations on sites far removed from the genital tract, such as thoracotomy or laryngectomy, and the inhibition cannot conceivably be due to anatomic change. It may amount to total impotence, but, more frequently, it is manifested by decrease in frequency. The individual is usually quite frank in stating that he regards this activity as too taxing to his body, or that it was followed by undue fatigue and hence seemed debilitating.

Sexual restriction in women may be associated with fears of injury and with hypochondriasis in these women who have been frigid or who have merely tolerated intercourse. For other women habitually frigid, who do not exhibit the hypochondriac response, the operation and experience of illness seem justification enough for cessation of a disliked activity.

Sexual activity cannot be easily abstracted from the quality of marriage, determined long before illness. In warm and supportive relationships, sexual relations tend to continue or else there is a mutual agreement on cessation for reasons of health, or otherwise. In ambivalent or hostile marriages, especially if there has been deterioration of economic status following illness, wives

withhold marital privileges from invalidated husbands. When they insistently demand sexual relations, husbands of female patients in such marriages are likely to reinforce the sense of injury.

The role of the physician in preventing these crippling beliefs and unnecessary restrictions of activity cannot be overestimated. From the very beginning, from the initial diagnostic examination a warm, friendly, trusting, intimate, confident relationship must prevail between doctor and patient. How does one establish this relationship? Let us consult the patient.

In an interesting survey, Doctor Otis R. Bowen of Bremen, Indiana² consulted nearly 500 persons on this subject and analyzed the results. When asked the question, "Would you like to be told if it were found that you had cancer?"

A 34-year-old businessman and a 50-year-old professional lady said: "I would want to know in order to better understand my illness. It is the unknown which frightens people the most."

I would want to be told in order "to relieve the torturing suspicion and fear. Knowing my condition I can seek means for a possible cure. If incurable, I shall muster courage to prepare myself for the inevitable."

A 39-year-old businessman, a 29- and a 61-year-old laboring man answered the same question with: "The shock of knowing wears off quicker than the uncertainty of continual worry and wonder."

"Who wants to be misled? . . . a person pays for a doctor's services just the same as one pays for a piece of merchandise—why misrepresent in either case? It does not pay. I would like to know what I am doctoring and spending hard earned money for."

A 53-year-old businessman stated, "I think I would know it or be so suspicious of it that the doubt would be more harmful than definite knowledge. If I felt I were being misled, I think I would lose some of my confidence in my doctor."

A 41-year-old minister stated that his ". . . answers are from a Christian standpoint . . . deception is a lie and no liar has access to the kingdom of heaven. Moral involvement necessitates the truth . . . There are often matters, both temporal and spiritual, that need adjustment before death comes . . . frankly, I have heard the complaint of deception lodged against doctors more often than any other complaint against the medical profession."

A 61-year-old laborer stated, "I would not ask my doctor to lie to me."

A 50-year-old housewife stated, "My nature dislikes anything but complete frankness. I believe, aside from any plans I might make, I would wish to leave my family and friends the memory of a Mother, brave, sincere, and Christian in time of great mental and physical tragedy."

A 27-year-old businessman said . . . "To know the truth and if it were bad would ease my mind more than to be constantly wondering and because there may possibly be some spiritual and material arrangement to be taken care of in the early days of the sickness rather than when life is just fading away."

A businessman who neglected to give his age stated, ". . . Understanding that I was nearing the end would enable me to be more of a comfort to my survivors. Having a false opinion that I was going to get well and yet feeling worse as time passed would put me in a mental agony, I believe, an agony that would only add to my distress."

Some of the pertinent and interesting results of Doctor Bowen's survey are most informative to the physician who wonders how to inform a patient of a cancer diagnosis.

1. 96.6% of all persons surveyed desired to know if they had cancer.
2. 99.1% of all individuals surveyed between the ages of 18 and 35 (which represents 48% of those who answered the questionnaire) desired the truth while of the group between 66 and 90 years of age, only 92.5% desired to be told if they had cancer. This may indicate that the younger group preferred the total truth concerning their condition more than the older group.
3. There was a slightly higher percentage of men that desired the truth than women.
4. 88.6% of all persons surveyed desired that their close relative be informed if they were afflicted with cancer. It is interesting to note that fewer people had a definite opinion on this question than on the first question (94.3% had a definite opinion on this question in contrast to 99.8% with a definite opinion when the answer pertained to themselves).
5. Only 12.3% of the patients surveyed felt that patients could be fooled. Fewer women than men felt that a cancer patient could be fooled into thinking that he did not have cancer. The age group of 36-50 represents the most suspicious age group.
6. 95.9% (93.6% males and 97.9% females) of all those who expressed an opinion stated the doctor should at least be one of the informers.

7. 1.5% stated that they preferred their minister to be the informer, while 2.4% choose their preference as a close relative. 2.6% preferred a combination of their doctor, minister and 3.1% preferred a combination of close relative and their doctor. No one chose a combination of close relative and minister.

8. According to age group and sex it was found that the age group 18 to 35 seemed to look to their doctor with trust and confidence in this matter more than any age group and that those 36 to 50 showed less tendency to trust their physician in this matter than any other age group.

Upon consideration of every facet of the problem it becomes apparent that the cancer patient should be told the truth, not only because he wants to know, but also because it is medically and morally sound to do so. There are, of course, exceptions to this general rule; a patient too young to understand, or to incompetent mentally, obviously should not be told. Those few patients who have previously expressed their desire not to be told should not have the knowledge thrust upon them, and perhaps a few of the very aged whose malignancies are known to be slow-growing and unlikely to cause their demise should be spared this knowledge. But by and large, it is dangerous to withhold the truth; you cannot fool the patient and you will undermine the all-important doctor-patient relationship if you try to fool him.

The patient's own desires, the doctor's own conscience, and good sound common sense all dictate that the diagnosis should be announced by the physician, or that the physician at least be present when the patient is told. In some cases it is advisable or helpful to have the patient's minister or a close relative present, or both, but the doctor should always be there, not only to clarify the situation medically, but also in order to bolster the confidence and the hopefulness of the patient.

The problem, then, of how to inform a patient that he has cancer is squarely up to the physician. It goes without saying that the first step for the doctor is to be very positive of his diagnosis by checking and rechecking and possibly consultation. In some types of cancer, of course, there is often a temporary doubt of the diagnosis until after a biopsy is performed, but in all types of cancers a positive statement is required of the physician because of the necessary surgery. The patient immediately thinks of cancer, needs reassurance and hope, and the imminence of surgery may immediately start the vicious cycle of depression, hypochondriac notions, and misconceptions which can ultimately result in the permanent disablement of the individual without any physical cause.

concluded on page 228

WHIPLASH INJURIES

A. A. SAVASTANO, M.D. AND DONALD F. LARKIN, M.D.

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WHIPLASH INJURY is the term which has become applied to the type of injury which is sustained by the neck when a sudden hyperextension of the cervical spine takes place. It was Arthur G. Davis who first described the condition in his article titled *Injuries of the Cervical Spine* which appeared in the *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION* in 1945. This type of injury commonly occurs when a person in a parked car or a person in a car with reduced speed has his neck suddenly hyperextended as a result of the car being struck from behind. These types of injuries can also occur when an unsuspecting person is slapped hard on his back, or the car in which a person may be riding stops suddenly, or from body blocking and clipping during a football game.

Because of the ever-increasing number of cars which appear on the highways yearly, the whiplash type of injury is being seen by the orthopedist and the neurosurgeon with increasing frequency.

The cervical spine consists of seven vertebrae. It is generally agreed that the atlas permits flexion and extension whereas the axis permits rotation at the atlanto-axial joint. The lower five cervical vertebrae permit motion comparable to that of the lumbar spine, although Jackson has stated that most of the stress and strain of hyperextension occurs at the fourth and fifth cervical articulations, whereas most of that of flexion occurs at the fifth and sixth cervical articulations. The principal difference between the cervical vertebrae and the other vertebrae is that the transverse processes of the cervical vertebrae contain a foramen — a neural foramen.

The joints involved in the articulation of each cervical vertebra consist of the two posterior joints, the lateral intervertebral joints and the cartilaginous joint between the vertebral bodies. Of these, the lateral intervertebral joints play the most im-

portant part in neck injuries because of their proximity to the intervertebral foramina through which pass the nerve roots. Any slight displacement of these joints can produce a reduction in the diameter of the foramina and thereby cause nerve root compression and pain. James Jr., and Hamel in their paper state that changes in the anteroposterior diameter of the foramina are greater in posterior subluxations than in anterior subluxations. It is generally agreed that the nerve root in a cervical foramen has plenty of room vertically but anteroposteriorly the nerve root fits rather snugly and therefore any injury which either reduces the space of the nerve root foramen or causes a swelling of the nerve root will cause the first symptoms to arise as a result of anteroposterior compression in the foramina.

In addition to the bony architecture the cervical vertebrae have a joint cavity, articular capsule lined with synovial strata, ligamentum flavum, interspinous ligaments and the complex musculature of the neck.

Another important anatomical fact is that most structures of the cervical spine which become injured in whiplash injuries receive their nerve supply from the cervical portion of the spinal cord.

As a result of the whiplash injury varying degrees of soft tissue injury take place. It is also possible for fractures to come about; however, the remarks in this paper will be limited to soft tissue injuries. Any one or any combination of injuries to the various capsular tissues or to the supraspinous ligament, the anterior and posterior longitudinal ligament or the ligamentum flavum may occur. The intervertebral disc may be compressed. The stretching or tearing of the soft tissue structures may produce subluxations, and hemorrhage into the soft tissues may follow. These soft tissue injuries are accompanied by muscle spasm, pain and limitation of motion. Pre-existing osteophytes and narrowing of the intervertebral space are complicated by the superimposed soft tissue injuries, and thereby the nerve root compression is increased.

Adhesions which form as a result of hemorrhage may come to play a part in the causation of pain because of the pull on the peripheral nerve tissues. If muscles are torn they may become partially replaced with fibrous tissue which will cause long

drawn out pain. Pain following whiplash injuries then, is due, in most cases, to adhesions, replacement of normal muscular or tendon tissue by fibrotic tissue, narrowing of the neural foramina or even protrusion of the intervertebral disc.

The patient who has sustained a whiplash injury may complain of any one or any combination of the following symptoms:

1. Headache. The headache is generally located in the occipital region, in the area of the occipital protuberance; but may occur anywhere in the patient's head. Some feel that it is possible for the patient to undergo a mild concussion at the time of the injury, which is responsible, to some degree, for the headache. This may explain why some patients may have a short period of unconsciousness or dizziness following the injury.

2. Pain in back of the neck. This pain is at first located in the back of the neck, but later on may radiate up to the back of the head or down to the shoulders.

3. Pain in the upper portion of the chest, particularly at the costosternal junction.

4. Limitation of the motions of the neck associated with pain and stiffness in varying degrees.

5. Varying degrees of paresthesia in the neck, shoulders, chest and upper back.

On clinical examination, the most common finding is limitation of motion associated with pain and muscle spasm in the posterior group of neck muscles. Shoulder motion may be restricted, particularly when the symptoms have been of long duration. In these cases one must differentiate the neck injury from shoulder injuries, such as rotator cuff injuries, or even subdeltoid bursitis. A small num-

ber of cases may develop sensory impairment to pin-prick and stroking; and changes in reflexes may occur.

Exaggeration of symptoms when pressure is applied downward on the head is of significance. This test can be applied with the head in flexion, extension and lateral flexion. Relief of symptoms by upward traction on the head is also of significance.

X-ray Examination

X rays of the cervical spine should be taken in many positions. Basically, these should include anterior-posterior views, open-mouth views to show the odontoid process and the atlanto-axial articulation, lateral views in flexion, neutral and extension, and oblique views. The most common X-ray finding is the straightening of the normal anterior, or lordotic, curve of the neck, which is thought to be due to muscle spasm. X rays can also demonstrate fractures, dislocations, subluxations, as well as pre-existing conditions, such as narrowed intervertebral spaces, osteophytosis, bone destructive diseases, etc. *Figures 1, 2 and 3.*

In a number of cases, the history of the accident serves as the most important factor in arriving at a diagnosis. In these cases, physical examination will be completely negative, and the X rays will show nothing remarkable. In these cases the patient's complaints are out of all proportion to the objective findings.

Treatment

In the average case, treatment is directed to the relief of pain and spasm. During the first twenty-four hours, cold applications are applied to the back of the neck to reduce swelling and hemor-

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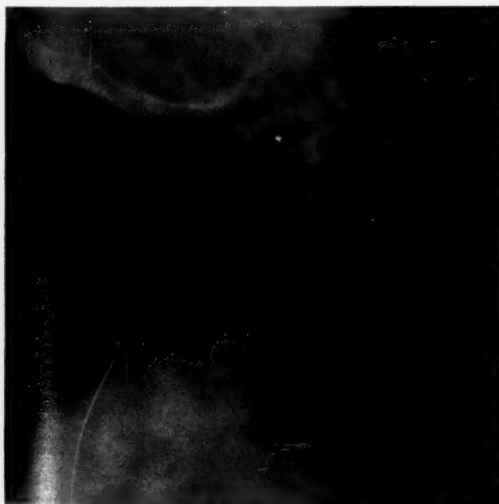


FIGURE 1

Lateral view. Cervical spine in extension. No abnormalities demonstrated.

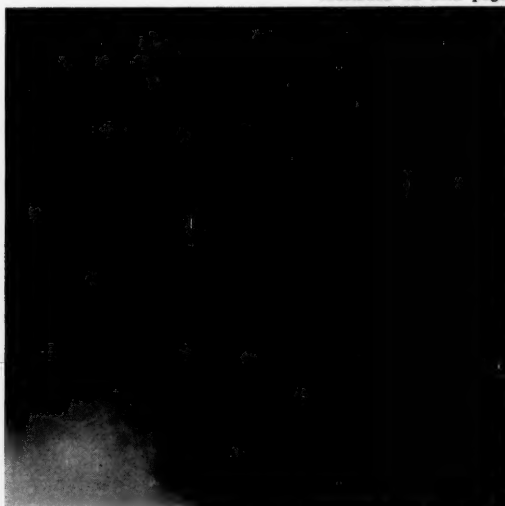


FIGURE 2

Lateral view. Cervical spine in neutral. No abnormalities demonstrated.



FIGURE 3

Lateral view. Cervical spine in flexion. Shows anterior subluxation of second cervical vertebra on the third.

rhage. After the first twenty-four hours, heat in various forms may be used, including infrared; hot, moist packs or short wave diathermy. If the injury is severe from the beginning, hospitalization is advised so that cervical traction may be applied early. In the early stages of the disorder it is important that the patient receive pain relieving and muscle relaxing drugs. After the acute phase, the patient is given a cervical collar and may receive periodic traction, either in the home or in the office. Each patient must be treated according to his individual needs. Occasionally, the muscle spasm is so severe that one has to resort to the administration of the Mephenesin group. Occasionally, the injection of Novocain into the trigger points of tenderness proves of considerable value.

In cases with prolonged symptoms of nerve root compression, a cervical myelogram should be done in order to assist in making a more definite diagnosis. If filling defects are noted, cervical laminectomy for the removal of the ruptured disc may become necessary.

In a certain number of cases, definite psychoneurotic tendencies develop and in these cases, one should engage the services of a neuropsychiatrist.

Prognosis

By and large, the prognosis in cases of whiplash injury is good, particularly in the cases where treatment is started early. However, a given number of cases remain disabled for months, and even years. In many of the latter cases, compensation and litigation may have some bearing on the patient's recovery. On this point, Nicholas Gotten, of Memphis, Tennessee, recently reported a study of 100

patients with previously diagnosed cervical neck strain following auto accidents, whose litigation or compensation claims had been settled. He reported that after legal claims for damage had been completed, 88 per cent of these patients showed recovery and over one half of them had no residual complaints whatever. Because of the latter, the neurosurgeon and the orthopedist must be on the constant watch for the one who misrepresents or exaggerates his complaints for personal gains.

SUMMARY

Whiplash injuries which occur most frequently as the result of automobile accidents are occurring at an increasing rate, because of the large number of cars on the American highways. This type of an injury takes place when the cervical spine is suddenly forced into acute flexion and then rebounds with sudden hyperextension. As a result of this mechanism, the patient may sustain fractures, dislocations, subluxations, hemorrhage into the soft tissues, as well as tearing or stretching of any of the soft tissue components of the cervical spine. The early symptoms include pain and stiffness in the neck, headache, paresthesias, limitation of motions of the neck and shoulders and radicular pain. X rays are generally negative, except for a straightening of the normal anterior curve. Treatment should be started early and should include cold applications for the first twenty-four hours, followed by heat, pain relieving and muscle relaxing drugs, traction and later cervical supports of one kind or another. Occasionally, a myelogram becomes necessary and a small percentage of those cases which have a ruptured disc become candidates for excision of the disc. The prognosis is generally good, but a certain number of cases become malingerers or exaggerate their symptoms until their medicolegal claim is satisfied.

BIBLIOGRAPHY

- ¹Survey of 100 Cases of Whiplash Injury After Settlement of Litigation, Nicholas Gotten, M.D., Memphis, Tennessee. (Journal of American Medical Association, October 27, 1956, Vol. 162, No. 9 Pg 865-867)
- ²Whiplash Injuries, E. G. Lipow, M.D., Washington, D. C. (Southern Medical Journal, December, 1955, Vol. 48, No. 12)
- ³Whiplash Injuries of the Neck, Otis E. James, Jr., M.D. and Herbert A. Hamel, M.D., Kansas City, Mo. (June, 1955 Issue of Missouri Medicine, Journal of the State Medical Association, Vol. 52, No. 6)
- ⁴Whiplash Fractures of Cervicodorsal Spinous Processes, Resemblance to Shoreler's Fracture, J. Gershon Cohen, M.D., and Earl Budin, M.D., and Frank Glauser, M.D., Philadelphia, Pennsylvania. (Journal of American Medical Association, June 5, 1954, Vol. 55, No. 6)

PATRONIZE JOURNAL ADVERTISERS

USE OF A FOOD PUMP IN G. I. DISORDERS AND IN PSYCHIATRIC-SURGICAL AND CHRONIC DISEASE STATES

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THIS REPORT concerns a new adjunct in tube feeding. For the past eighteen months, a food pump which was designed by James Barron, M.D. at the Henry Ford Hospital, in conjunction with Chrysler Corporation has been used in this study. In effect, this pump transports the prepared feeding mixture from a container through a tube and by alterations of a speed control, will deliver a fine mixture at desired rates so that it is acceptable to the G. I. tract. Three food pumps have been in operation in more than fifty patients with various clinical conditions. A summary of the results in six cases is recorded below.

A polyethylene feeding tube of less than 2.5 mm. has been used in most of the work. It has the advantage of less discomfort to the patient and at the same time will transport a well-strained feeding mixture. "While primarily designed to deliver liquefied foods at a desired rate, this pump may be readily used to pass such materials as bile, gastric juice, pancreatic juice, electrolytes, prepared feeding formula, water soluble drugs, and liquefied natural foods. Any drug or chemical which is water-soluble may be readily added to the feeding bottle."¹

Barron, in his report on the preparation of natural foods for use in tube feeding, offers a sample preparation using milk, eggs, strained meat and vegetables as follows:

While strained baby foods may be utilized, the use of mechanical "blenders" followed by fine straining is easily accomplished. At the Henry Ford Hospital colloid Mills have been used on a large scale for feeding patients.

This machine obviates the necessity for 1.) Juggling electrolytes. Lost secretions can be returned in most instances and a balanced diet supplies essential electrolytes. 2.) Intravenous alimentation. Fluid is supplied by pump. 3.) Oral admin-

¹Literature available with Tomac Food Pump.

A sample feeding preparation using milk, eggs, strained meat and vegetables is as follows: (Fig. 1)

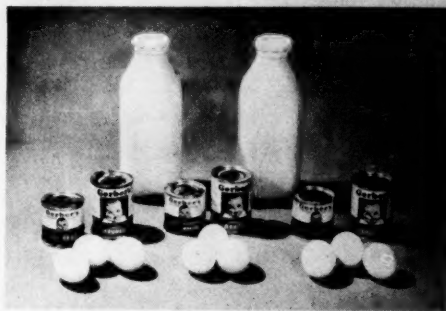


Figure 1

	Protein	Calories	Retail Cost
1/2 lb. or Strained Meat (Beef)	14.6 gm.	103	.25
1/2 lb. or Strained Vegetable (Beets)	1.5 gm.	51	.11
3 eggs	18 gm.	228	.12
Milk 2 1/2 qt. (Homogenized)	23.3 gm.	666	.14
	57.4 gm.	848	.60

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istration of artificial unpalatable mixtures. It is a more natural approach for handling a feeding problem. 4.) Strict nursing supervision. The patient can be taught to control the machine and in many instances can take a more active and interested part in convalescence.

The indications for tube feedings with natural foods are numerous and one can discover new ones in everyday practice. The following categories offer good therapeutic opportunities. 1.) The debilitated

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FIGURE 2
Food Pump in Use

patient who cannot, or will not eat (a) psychiatric problems, eg. anorexia nervosa, (b) mental depression etc. 2.) The preparation of the chronically ill patient for an extensive surgical procedure and as an aid in post-operative healing. 3.) Neurological problems where the sensorium is clouded and where there is difficulty in swallowing such as in cerebro-vascular accident, brain tumor, poliomyelitis etc. 4.) Protein depletion states due to (a) burns, (b) liver disease, eg. cirrhosis, (c) prolonged diarrhea eg. ulcerative colitis, (d) malabsorption syndromes, eg. post-gastrectomy states, hyperemesis gravidarum.

There are other theoretical considerations such as its use as antacid drip therapy in chronic gastritis, peptic ulcer and in the anorexic phase of hepatitis, etc. Careful observation is advised however, in respect to high protein feedings in advanced liver disease because of the risk of precipitating hepatic coma.

The following examples of the use of this food pump in certain instances illustrate some of the above categories.

Case No. 1

J. M. was admitted to St. Joseph's Hospital February, 1956, with the complaints of weight loss, hoarseness, difficulty in swallowing for eight weeks prior to admission. After complete work-up, laryngoscopy revealed a Grade II squamous cell carcinoma of the hypo-pharynx. On February 22, 1956, a total laryngectomy with left radical neck dissection was performed. Postoperatively, polyethylene tube feedings were begun with the food pump. On March 18, 1956, the patient was receiving five quarts of a mixture totaling 4500 calories daily. Tube feedings were discontinued on March 28, 1956, and the patient was started on a soft diet. The patient's weight at the onset of tube feedings was 100 pounds, and at the time of discharge he weighed 120 pounds. A small pharyngo fistula developed as is often expected in this type of case but healed before discharge. At this date, patient has improved and now weighs 150 pounds and there is no gross evidence of metastases.

Case No. 2

M. J. was admitted to St. Joseph's Hospital December, 1955, with a complaint of hematemesis and melena three hours prior to admission. The diagnosis of Laennec's cirrhosis of the liver had been established elsewhere by liver biopsy. Upper gastro-intestinal series after stabilization revealed a gastrectomy performed in 1947 for adeno-carcinoma of the transverse colon at which time a portion of the jejunum and part of the stomach were removed. Esophageal varices were noted. Laboratory findings were as follows: hemoglobin on admission was 6.5 grams, red blood count, 1,520,000,

total protein 5.6 grams, albumin 4.2, globulin 1.4, alkaline phosphatase, 4 KA units, cephalin flocculation 3+, BSP 24.5%, prothrombin 68%, total cholesterol 88 mgs.%, esters 45 mgs.%, Vandenberg normal. After stabilization of the patient's condition by blood transfusions, a polyethylene tube was put into the Blakemore tube and the food pump was started on January 11, 1956. These feedings were continued until January 23, when the total protein was 8.1 grams, albumin 4.8 grams, globulin 3.3, BSP was 10.7%, prothrombin was 100%, all figures representing an improvement over baseline liver function tests. The patient had a porto-caval shunt performed on January 30, 1956, had a very uneventful postoperative course and was discharged well on February 18, 1956. Tube feedings were not required in the postoperative phase.

Case No. 3

S. C. a sixteen-year-old white female admitted to Our Lady of Fatima Hospital with a complaint of intermittent vomiting for ten days. She had a previous history of vomiting which continued for four days, requiring hospitalization and intravenous therapy. The mother stated that the child had always been emotional and that when she was at school she had episodes of psychogenic vomiting which occurred when she was not doing well. Initial impression was that of anorexia nervosa and gastritis. On admission, she was a poorly nourished female. All laboratory tests were essentially normal including gastric analysis. X-ray examination of the stomach and small bowel revealed the stomach to be elongated and emptied rather slowly. The small bowel showed some dilatation and edema of the mucosa. Gastrosopic examination was carried out and showed scattered patchy areas of atrophy. The patient was placed on a high-vitamin bland diet and was given, in addition, tube feedings with the food pump. On this regime, she gained approximately six pounds in six days. She was discharged on November 23, 1955, clinically improved. It was the opinion of her private physician that previous episodes of vomiting and weight loss had required a longer period of hospital care and other measures which were not required when the food pump was employed.

Case No. 4

J. P. a fifty-three-year-old white male with a history of ulcerative colitis over a fifteen-year period and several hospital admissions. Two months prior to admission he had a flare-up and was treated with transfusions, ACTH and had a remission. Within a matter of weeks, he was readmitted November 18, 1955, at the Roger Williams Hospital. At that time he was an acutely ill, depressed patient who did not care to eat or to live. He was febrile. There was reversal of the A-G ratio, leucocytosis and anemia. The patient's

weight on December 3, 1955, was 112 pounds. He was started on tube feedings and on December 22, the patient weighed 122 at which time he was taking 5 quarts of tube feedings (4500 calories) in addition to three meals daily. Because of allergy to milk, Mullsoy was used. Transfusions and ACTH were also employed. On December 17 hemoglobin was 13 grams, RBC 4,250,000, hematocrit 45, total protein 7 grams, albumin 3.6, globulin 4. While ACTH and transfusions were of benefit, tube feeding was certainly of definite advantage. The patient has been well to this date, one year later.

Case No. 5

G. W. a fifty-one-year-old, white male admitted to the acute Medical Service of Our Lady of Fatima Hospital on March 2, 1956.

On the day of admission, the patient having suddenly collapsed at work was brought to an LMD's office in a semiconscious state with marked paralysis of the right side. The positive physical findings were sluggish reaction of the pupils to light. Lungs revealed stertorous breathing. Extremities: complete flaccid paralysis of the right arm and leg. The patient was placed in oxygen and at 4:00 P. M. on the day of admission a left stellate ganglion block was performed for the relief of pain. The day following admission, tube feeding with the food pump was commenced and this was continued for a period of eight days. At the end of this time, the patient began to show definite improvement and was taken out of oxygen. Physiotherapy was undertaken and at the present time, the patient is under a rehabilitation program, and has made a gradual recovery.

Case No. 6

E. T. a forty-five-year-old white female admitted to Rhode Island Hospital December 27, 1956, with a problem of severe malnutrition following subtotal gastrectomy for suspicious, but benign, prepyloric ulcer three years prior to admission. Her weight before surgery was 130 pounds. A dumping syndrome developed and in August 1956, a revision of her gastrojejunostomy was performed. Her weight at that time was 81 pounds.

Weight loss continued and at the above admission she was a severely malnourished white female appearing 20 years older and weighing 73 pounds.

Laboratory hemoglobin 11.8 grams/100 cc, hematocrit 38%, blood volume 4,795 cc's, plasma volume, 3,000 cc's, prothrombin 54%, total protein 5.8 grams/100 cc's, albumin 3.3 grams/100 cc's, thymol 7 units, alkaline phosphatase 55.6 KA units, calcium 5.1 mgs.%, phosphorous 4 mgs.%.

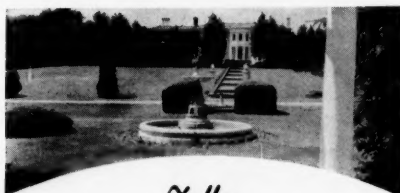
Course: Despite a six-meal high protein, high carbohydrate regimentation patient lost five pounds and an additional two pounds on intermittent tube

feedings with a standard prepared formula. She developed an exacerbation of the dumping syndrome and hallucinations and disorientation attributed to starvation and avitaminosis. The food pump was then used with liquefied natural food high in fat and protein and low in carbohydrate. Sorlate and Entozyme were added to the feeding. On this program, her mental symptoms cleared rapidly, dumping ceased and she continued to eat three meals in addition to the 2100 calories supplied by the food pump. In eighteen days she gained 10 pounds. At this writing she has gained twenty additional pounds.

Follow-up laboratory data: Hematocrit 43%, total fecal fat 9% of dry weight (normal for R. I. Hospital Laboratory). Total protein 6.2 grams with albumin 4.0 grams, thymol 4 units, alkaline phosphatase 23.2, prothrombin 92%.

Conclusions

A review of the use of a food pump introduced by Doctor James Barron of the Henry Ford Hospital, Surgical Department, has demonstrated very definite advantages in a variety of instances with generally good acceptance by the patient. This machine provides a powerful therapeutic tool in many fields of medical endeavor and other indications will readily suggest themselves with a further appreciation of its value.



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17th ANNUAL CONGRESS ON INDUSTRIAL HEALTH

A Summary Report

*Issued by the American Medical Association on the Congress
held in Los Angeles, California, February 4-6, 1957*

REMARKABLE PROGRESS in reducing health hazards and a 30 per cent drop in accidental deaths from 1940 to 1955 were hailed as major contributions of industrial medicine, during the 17th Annual Congress on Industrial Health held recently.

This progress was cited in a keynote speech by Doctor Dwight H. Murray, Napa, California, president of the American Medical Association. The Congress, attended by some 750 persons, was sponsored by the A.M.A.'s Council on Industrial Health and six other cooperating groups.

During the Congress, which highlighted burns, vision, and hearing, the annual award of the President's Committee on Employment of the Physically Handicapped was given to Doctor Rufus Baker Crain, Rochester, New York. Doctor Crain, 68, was chosen because of his valuable advice and assistance in the fields of physical demands analysis and rehabilitation of the handicapped, particularly those with heart disease.

In the first day's session on vision, Doctor Franklin Foote, New York, executive director of the National Society for the Prevention of Blindness, pointed out that more than 90 per cent of all industrial eye accidents are "needless and preventable."

He also said that many cases of eye disease which can cause permanent impairment or loss of vision can be caught if detected early. Four testing methods have been developed to find potential cases — visual acuity tests, ophthalmoscopic examination of the fundus, tonometry, and screening of visual fields.

Tonometry, used to detect chronic simple glaucoma, has been found highly efficient in industry-wide testing programs. Affecting many persons who do not suspect it, this disease becomes more important with age.

"This procedure will find more new cases of potentially very serious disease than almost any other screening test such as chest X rays, and therefore is worth while for persons over 40 years," he said. Tests to show possible eye impairment from general diseases such as diabetes and hypertension, should be done on all employees periodically.

Prevention of Eye Injuries

While early diagnosis is important in disease, prevention is needed in the problem of accidental eye injuries, according to James E. O'Neill, director of the Society's industrial service.

"... the task of wiping the safety slate clean of eye accidents is as easy as rolling off the proverbial log," he said. "And the excuses still being offered as a substitute for measurable results simply won't stand close examination. ... The way to eliminate needless eye injury and loss of sight is to eliminate what is known as job-selection protection. ..."

In other words, safety eyewear should not be worn just by those working in known hazardous areas. It should be provided for all employees, and for visitors. The rules must be mandatory, and employees must be educated to protect themselves. O'Neill said that "those who wear eye protection are *not* becoming part of the eye injury statistics."

He suggested that medical, management and safety personnel, in some cases key supervisors, and always labor representatives, should decide together on a sight-saving program for their own situations.

Eye injuries resulting from chemicals can be prevented from causing serious damage if prompt action is taken, according to Doctor Ralph Ryan, Morgantown, West Virginia, practicing physician. He said the first treatment for a worker injured by chemicals "must be at or near his place of work."

"The loss of an extra minute before the chemical is washed out with water or physiological saline may mean loss of useful vision to the eye. Water is the most universally available irrigating material.

"Therefore employees exposed to harmful chemicals should be given training in recognizing the quickest means of washing an injured eye."

O'Neill emphasized that the lid must be opened, which can be done with the fingers, and that plenty of water should be used. The eye should be washed without stopping for at least 10 minutes. Almost any source of water will do, but in areas where hazards are great a bottle of sterile physiological saline or water with a siphon rubber hose may be arranged over a bench or low table where the injured worker may be laid on his back for eye irrigation.

Color Blindness

Some false notions about color blindness and its effect on a worker's job ability were corrected by Commander Dean Farnsworth, of the U.S. Naval Medical Research Laboratory, New London, Connecticut, Naval Submarine Base. He said:

Ten per cent of American men, but only one per cent of the women are color blind; it is inherited, usually from a man's mother's father; it is not curable nor can it be remedied; it can not be acquired by alcohol, tobacco, sickness, or any other means; color-blind persons, with a few rare exceptions, are not insensitive to all color.

Commander Farnsworth explained that there are three types of color-blind persons: *protans*, or red-green confusers, who see yellow and green but to whom red and blue-green appears grey; *deutans*, who see yellow and blue but to whom greens and red-purples look grey; and *tritans*, who see red and green but to whom yellow and blue look grey.

Among them there are degrees: the mildly color blind person gets along all right with colors; the moderately color blind has difficulties with colored insulation on wiring; the severely color blind can not handle color coding.

His laboratory has developed a test which can detect color blindness simply, he noted.

Noise Exposure

Rapid screening with a simplified test, and better records, were noted as major factors in the problem of hearing loss due to noise in industry or to other causes, speakers pointed out in the session on this topic.

Doctor Howard House, chairman of the subcommittee on noise in industry of the American Academy of Ophthalmology and Otolaryngology, Los Angeles, said one in ten persons in the U.S. has a hearing impairment. Many can be treated, some are permanent. Many are reversible if they are found early, and others are preventable.

"If you have to shout to be heard" in your industry, "you have a noise problem," Doctor House said. He recommended these steps:

Analysis of noise exposure: if it is of the type and intensity to produce possible hearing damage then the noise should be controlled either by stopping it at the source with isolation, changes in method of operation, quieting the machinery, or sound treating the environment, or stopping it at the individual level by ear protection devices including muffs or plugs or both.

He recommended that every employee be given a pre-employment hearing test with periodic check-ups to detect changes. This can be done in a rapid screening method using the "single frequency test," which does not require highly trained personnel or soundproof rooms.

This test, plus standard data forms for recording hearing and hearing impairment are the major contributions to hearing conservation, according to Doctor Aram Glorig, director of research for the same committee.

Doctor Glorig said hearing tests are "essential in industry," and must be part of the pre-employment examination and later followups. He noted that four major factors characterize noise exposure in industry: the over-all noise level, the frequency or composition of the noise, the duration and time distribution during the typical work-day and work-life of an employee, and the total exposure during work-life.

He noted that tests among jet aircraft mechanics and glass container manufacturing workers showed that the jet workers had less hearing impairment at about the same level of noise. The difference, he believes, is that the jet workers were exposed less continuously than the glass factory men. Another factor, he said, was the wider use of ear protection among the jet workers.

In preserving hearing, Doctor Walter Rosenblith of Massachusetts Institute of Technology said that the standards must be based on "hearing for speech," since communication is the major need for most people.

If this kind of hearing can be protected and preserved among older people it would accomplish two important goals, he said: it will make it easier for them to adjust psychologically to their rapidly changing environment, and it will lighten the load of those who "produce the goods and provide the services" in a nation in which "the proportion of older people is increasing rapidly."

Treatment of Burns

In the final session on burns speakers agreed generally that the "exposure method" is best for mass casualty situations. A new modification of this method was described; tests show that it could be used for care of burned children at home, or by the burned person himself in event of atomic attack when medical personnel will be in short supply.

Lt. Col. Robert D. Pillsbury, director of the surgical research unit at Brooke Army Hospital, and Cmdr. George T. Van Petten, U.S. Naval Hospital, Newport, R. I., reported on their use of the exposure method on a mass basis.

Cmdr. Van Petten, who directed a "serious-case" ward after the disastrous explosion and fire on the U.S.S. Bennington aircraft carrier, said exposure is the only "workable method" for mass burn situations like the Coconut Grove, Texas City, Hartford Circus and Bennington disasters, or for atomic attacks.

"It is therefore of utmost importance that workers in all phases of medicine, first aid, nursing and

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associated fields not only have a thorough working knowledge of the general management of burns but also realize the advantages and peculiarities of the . . . exposure technique," he said.

In general, in this method burned surfaces are left open to air without any medication. Loose skin is removed and the area washed with saline. Blisters are left intact. Further skin removal is done at the first sign of infection and infected blisters are removed. Later skin grafting may be done.

An aluminum powder dusting which provides a tough but pliable covering for burns has been used successfully at the Hospital for Sick Children in Toronto, according to Doctor M. D. Maxmen of the hospital staff. He said this can be applied so easily that parents may use it at home for burned children, and that 600 such cases handled this way in Toronto showed no complications.

In large casualty situations where treatment would be in the hands of lesser trained persons or the victims themselves, treatment with aluminum powder for the first 48 hours could be done "with a minimum of effort," he said.

THE DIAGNOSIS IS CANCER — THE DOCTOR SPEAKS

concluded from page 219

The proper method of telling the patient varies, naturally, with the particular circumstances and the particular personalities involved, but by and large the aims to keep in mind are truthfulness (be positive and specific; to not belittle the seriousness of the situation), warmth (use your knowledge of the patient as an individual and your own personality to establish a good, trusting relationship right from the start), and hopefulness (tell the patient of other cases similar to his and of the many treatments available).

It is often, in fact almost always, helpful to bring the word cancer into the discussion immediately. It clears the air, since no matter what the voiced complaint, the real one is fear of cancer, and it opens the way for a frank and confiding discussion of any superstitions or misconceptions the patient may have on his mind. If this openness is attained in the first conversation, you have taken a big step toward the ultimate rehabilitation of your patient.

What I tell my patients sounds something like this: "You have a tumor in your rectum. At this examination, I cannot label the type of tumor definitely; therefore I have removed pieces of it for microscopic examination.

"I know what you are thinking,—cancer. To be honest, the surface does not look good because it is ulcerated. It is on the surface, however, and just as a bruised apple rots from the top to the

center, so a tumor in this area may be bad only on the surface. I will know, and I will tell you positively when I receive the report.

"Regardless of the report, I can tell you now that the size of the tumor indicates that you may need a colostomy, which is the removal of the rectum and the substitution of an opening in the side of your belly. There is also the possibility that the tumor may be removed without causing any narrowing of the rectum, and you will be as you are now. Whether or not you will need this opening on the side can be determined only at operation.

"This is a serious operation, and as in all operations there is always the possibility of complications. You should get your house in order as regards your family, your will, etc., so that we can arrange promptly for your hospitalization. This sounds serious; it is serious, but I have faith that you will survive this illness. You must have faith in my solemn promise that I will do what is best for your cure."

I then encourage my patient to ask me any questions that may occur to him, and I answer them as specifically and as honestly as possible. I feel that this mental preparation for a serious operation is most desirable in that it allows for almost any eventuality and yet in case of a palliative procedure with metastasis, the patient would not be cognizant of his oncoming terminal status.

Whatever our words to our patients, we must first of all wipe fear, doubt, ignorance, confusion from our faces. Our patients pay less attention to what we say than to how we say it, more attention to our facial expression than to our words. The facts are and must be clear, and our knowledge specific and unequivocal when we examine and talk to the patient.³

As in any illness, a warm personal relationship between physician and patient is essential to diagnosis, treatment and cure. The doctor should seem protective, not threatening, and should encourage dependency, especially in the early stages. He should draw out the patient in order to combat with facts any irrational beliefs or misconceptions the patient may entertain. The sense of trust developed will enable both doctor and patient to achieve the complete rehabilitation which is their common aim.

REFERENCES

- ¹Sutherland, Arthur M.: "Psychological Barriers to Rehabilitation of Cancer Patients." *Postgraduate Medicine*, June, 1955
- ²Bowen, Otis R.: "Why Cancer Victims Should Be Told the Truth": *Medical Times*, Vol. 83, No. 8, Aug., 1955
- ³Elman, Robert: "Mammary Cancer: Facts and Figures": *Journal of the National Medical Association*, Vol. 47, No. 4, July, 1955

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TOBACCO AND LUNG CANCER

AT THE TIME of this writing word has just been received of the death from carcinoma of the lung of Doctor Evarts A. Graham of St. Louis. This sad event gives us reason to take pause. Even though Doctor Graham had not smoked for the last ten years of his life, he had been a cigarette smoker before that.

Although Mueller in Germany had suggested as early as 1939 that a relationship between lung cancer and smoking was probable, Graham and Wynder were responsible for the first forceful and significant presentation of this hypothesis to the American medical profession. A report of the studies on which their conclusions were based was made to a national cancer conference in 1949. Since that time there has been increasing attention given to the subject. The statistical studies of Hammond and Horn for the American Cancer Society, reported to the American Medical Association in 1954, were largely responsible for the widespread interest of the laity in the subject. So much apprehension, in fact, was aroused by this report that it was followed by a substantial fall in the value of tobacco stocks on the New York Stock Exchange (they have since recovered).

There has been much space devoted to the sub-

ject both in the medical literature and in the lay press. The reports have embraced both statistical and experimental studies, the latter having largely to do with the possible presence of carcinogens in tobacco smoke. The validity of some of the statistical conclusions has been questioned by Berkson of the Mayo Clinic and by Hueper of the National Cancer Institute. The evidence in favor of a relationship between smoking and lung cancer, nevertheless, seems to be increasing.

A review of this now large subject would not be appropriate here. The interested reader is referred to an excellent and comprehensive editorial review by Paul W. Clough titled, *The Relationship of Cigarette Smoking to Bronchogenic Carcinoma* in the January 1957 issue of the *ANNALS OF INTERNAL MEDICINE*.

As doctors, however, we are constrained to note the reports from Great Britain by Doll and Hill, both experts in medical statistics, on mortality among British doctors. From their massive studies they have concluded unequivocally that among physicians the "rising mortality from lung cancer in smokers compared with non-smokers, and in heavy smokers compared with lighter smokers has been a feature of each stage of life."

continued on next page

MORE MEDICARE

IN JANUARY we editorialized on *The Erosion of Medical Liberties* in which we detailed some of the basic philosophy concerning the Congressional action in expanding governmental medical care through the Dependents Medical Care Act.

We noted that the Senate and House conferees stated that after the plan had been in operation for spouses and children for a period of time

"it may be possible to later extend the law to the other groups that would have been included under the House bill . . ."

And further, the report stated,

"It is obvious that the program cannot be extended to retired members and other groups until at least a cost and experience level has been obtained as a result of the program which is to be placed in operation . . ."

The Medicare program went into operation on December 7, 1956.

Two weeks after the 85th Congress convened, Representative Boggs (D) of Louisiana introduced a bill to amend the Medicare act to provide that certain retired members of the uniformed services should get the same benefits as certain dependents of members of the uniformed services.

On February 18, Senator Kefauver (D) of Tennessee, introduced the same amendment in the Senate as Representative Boggs had presented to the House.

These actions clearly indicate how quickly is the progress of the "foot-in-the-door" technique in the expansion of socialized programs stemming out of our Congressional chambers. Once certain retired members get additional benefits, all retired members will clamor for the coverage. If ever we have had a "dry run" in the making of a pattern for a socialized medical care system in the country, it is apparent the present program is it.

When the state medical societies were forced to negotiate individually with the federal authorities for this program, little did they apparently realize that the divide and conquer technique was in operation. A check on the varied schedules of allowances for the states — especially in view of the fact that the revised schedule for Rhode Island was not approved — shows the confusion that was created.

And further evidence of the problem is highlighted by the latest action of the federal authorities in refusing to renegotiate any state programs after six months of operation, as originally promised. Now the renegotiations are put off until 1958. Why?

The most flagrant abuse of the medical profession that has come to our attention in the Medicare releases is that made in the Department of Defense pamphlet (6-4) titled *Medical Care for Service*

Dependents prepared by the Office of Armed Forces Information and Education. Presumably every serviceman, or his spouse, got one of these propaganda pamphlets. Listen to this opening message in the pamphlet:

"Assume you're a Service wife in trouble . . . real trouble! You are driving across the country with your 12-year old son, Johnny, when suddenly he becomes ill. Stopping along the way, you take him to a civilian doctor who advises immediate hospitalization.

"You shudder! Your husband is overseas and you are a thousand miles from home. You are far away from Armed Forces or Public Health Service hospital, and your cash is running low. What do you do? . . ."

What a ridiculous question to ask! Who would ever think of asking for help in the nearest community in such a case in this great country of ours? No one, of course, because we are a callous, hard-hearted people who like to see children suffer, mothers in distress, and everyone in trouble. No community hospital would ever admit the patient described above; certainly no doctor would ever help the patient!

But, says our propaganda friend in Washington . . .

"You don't have to worry about the cost of hospitalization or treatment in a hospital for yourself or your children in most cases. There are some exceptions which will be discussed later. Generally, though, the United States Government stands behind you . . . ready to pay most of your major medical expenses."

Run up the flags and break out with the cheers, for Uncle Sam has come to the rescue with Medicare . . . (and an increase in taxes that is never mentioned).

But doctors, like every other working person, should be paid for their services, and suppose the government allowance isn't sufficient to pay the cost of the service? Then, says our propaganda writer (without Congressional authority) . . .

"When you seek civilian medical care, ask the doctor whether he has agreed to accept the fee stipulated by the Government as full payment in your case. He should expect you to pay no fees (other than ones authorized by the government). IF YOU DO PAY MORE, THE GOVERNMENT WILL PAY NO PORTION OF THE BILL." (Capitals ours.)

This assumption, based on no Department of Defense directive that we have been privileged to read, and certainly not based on any provision in the bill enacted by the Congress, is an open attempt to discredit every American physician who would disagree with the schedule of allowances that the federal government would establish for his practice, even if the allowance is inadequate for the service rendered, or below the customary fee for that service in any given local area.

The question is not one of fees or allowances.

The question is one of principle. The American doctor, in our opinion, is obligated to render the

same high standard of medical care to the dependents of the armed services that he gives to every other citizen, and he is entitled to set his own fee for his services on the basis of the fair, customary and prevailing charges for such services in his own community.

When we cease to uphold and fight for honest American principles of freedom, we are ready to yield to the socialists. In Rhode Island, at least, we will never yield.

STRESS

In clinical discussions and considerations of the patho-physiology of disease, injury and surgical operations, no word is more often repeated than the word "stress." From the many definitions of this key word that are found in dictionaries, none is completely satisfactory, but the concept is one with which physicians generally are quite familiar. Perhaps, if one calls it severe strain on the structure and functions of a person, one will have come close to defining it: strain on the whole human being, his tissues, his emotions, his personality.

Since the early studies of Cannon and other physiologists on the activity of the adrenal medulla and sympathetic nervous system in the preparation for "fight or flight," much additional information has been added. The work of Bayliss, Thorn, Selye and a host of others have shown the nature and importance of the reaction to stress, with particular emphasis on the secretion of steroid compounds by the adrenal cortex, a number of which have been isolated and studied. Some have been modified and improved by the magic of chemical synthesis. Although the methods available for the measurement of the adrenocortical steroids produced under stress leave much to be desired, still, the fact that they are so produced is definite.

It is clear, furthermore, that various types of stress can bring about the defensive reaction which the increase in the production of these substances represents. Both physical and emotional stress can produce this result, and this reaction is, it must be remembered, one of the normal functions of the body — for man was not built for existence in a world of calm, but in a world of danger and anxiety.

The pathway from the higher centers through the hypothalamus to the anterior pituitary, and the resulting increase in corticotropin, which stimulates the adrenal cortex, is a common conception, and yet we are but on the threshold of a real understanding of the whole picture. Further knowledge will be obtained in two ways: First, and most important, by careful and painstaking research illuminated by the glow of constructive imagination which is constantly pointing the way that the plod-

ding steps of investigation must travel — just such research as that which has brought us to the point we have already reached. Second, and unfortunately, by the crude system of trial and error — error which is bound to be costly.

That the steroids derived from the adrenal cortex and their analogues are extremely powerful materials must be realized by all. It is, however, equally apparent that areas left vacant by apprehensive angels do not remain vacant long. Under the seductive influence of pharmaceutical salesmanship, and the demand for the latest "scientific" treatment by the partly informed public, the practitioner is tempted to the free use of powerful agents such as these, when, in many instances, those who have really investigated them and know them best are using them with caution and conservatism. The more we know of the real nature and results of stress, and the more we can find out about these important substances with which our bodies react to stress, the more effective will be our care of those who need our help when the stress bids fair to be more than they can bear.

NEW YORK IN JUNE

Once again the "greatest medical show on earth" comes to the Eastern seaboard when the American Medical Association holds forth in its 106th annual session in New York City, June 3d through the 7th.

Exhibits, scientific lectures, medical films and color television programs of the highest order will provide the incentives for more than twenty-thousand doctors to make the trip to New York for a postgraduate medical education course that is without equal.

Those of us in New England who are very familiar with the nation's largest city will look forward (as we are sure visitors from all states will) to participating in the programs at the new Coliseum — New York's four-storied exhibition hall at Columbus Circle. This new edifice will permit doctors to attend lectures, visit scientific and technical exhibits, and view television and motion picture programs in the one building.

Escalators, plus high-speed elevators, air conditioning, and all the latest features for the comfort and convenience of convention registrants should make the New York session a pleasant one for all. Certainly more Rhode Islanders than ever before should plan to attend this year.

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HIGHLIGHTS OF THE 53d ANNUAL CONGRESS ON MEDICAL EDUCATION AND LICENSURE

Abstracted from the Summary Report of the
American Medical Association of the Meeting
held in Chicago, February 9-12, 1957

THE CONGRESS, attended by almost 1,000, is sponsored by the American Medical Association's Council on Medical Education and Hospitals.

The efforts of all sectors of medical education in making men "fit" to practice medicine while this expansion continues was considered from several viewpoints.

Setting the background for them was Doctor Herman Weiskotten, Skaneateles, New York, retiring chairman of the Council, who defended current medical education while pointing out future needs.

Doctor Weiskotten said critics of medical schools generally have no firsthand information and are usually persons with "special interests" in socioeconomic, psychological or public health fields.

He said the provision of full-time competent faculties, properly equipped laboratories, and the atmosphere "of untold importance in the scholarly growth of medical students."

Doctor Dwight Murray, Napa, California, A.M.A. president, said that since the four years of expansion of research in schools have provided an undergraduate training are too short to learn "everything," medical education must continue throughout the doctor's life. A major need today is for expansion of postgraduate work to keep the doctor "a truly fit practitioner."

By "fit to practice" Doctor Murray said he meant possessed of "a sense of personal dedication to scientific humanitarian service, a dedication to the ideas of the medical profession . . . honesty (intellectual as well as moral) and an over-all high standard of personal ethics, the willingness to work hard and continuously, a lively curiosity about people and processes, emotional stability, and a sympathetic personality."

Unfortunately, the "demanding period of training, with its inevitable economic strain, has become so long that it is beginning to discourage candidates from entering the field of medicine," according to Doctor W. Barry Wood, vice president of the Johns Hopkins Medical Institutions.

Many young men have to enter private practice immediately on graduation because they can't

afford hospital residency experience.

"Such shortcuts to practice in this age of expanding science deprives society of the maximal return on its investment in medical manpower," he said.

Harvard's Approach to Problem

One attempt to correct this is the long-range plan at Harvard where efforts to attract talented students to medicine are based on two factors: shortening the course of training for physicians by two years, and cutting accordingly the now almost prohibitive costs of medical education.

The objectives are to break down "the presently existing barrier" between the liberal arts and the medical sciences, and thus not only liberalize training of medical students, but also bring the school of medicine into closer collaboration with the rest of the University; to add strength in the basic science department of the medical school "on the grounds that these departments must, in the final analysis, serve as the foundation of clinical medicine and public health."

The notion that "scientific training dries up the milk of human kindness" was attacked by Doctor Dana W. Atchley, professor of clinical medicine at Columbia University College of Physicians and Surgeons.

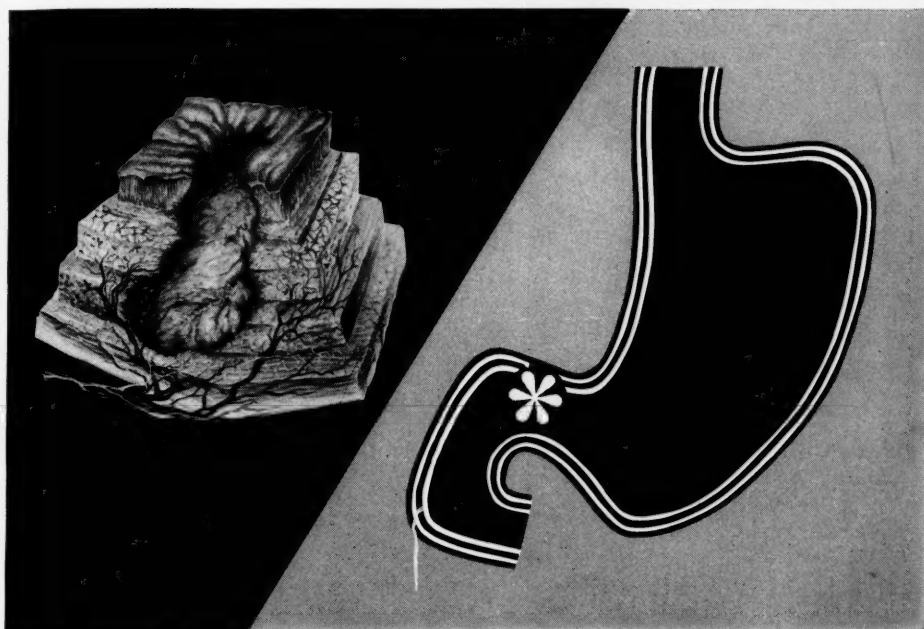
Self-Reliance Vital

Stating that a physician must be "first of all a scientist," Doctor Atchley said that educators seeking to produce the ideal physician should try to select cultivated men and women. However, they can be made into complete physicians capable of coping with the complex and changing field of medicine in only one way: "by establishing an atmosphere of sound critical thinking, in an environment dedicated to advancing the science which is the physician's unique contribution to man's health and happiness."

Because facts become outdated so quickly today, a new physician must rely on himself to evaluate new knowledge. His scientific growth depends more on "how he learned to use his mind rather than on what he was able to store in it during medical school."

continued on page 236

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Unfortunately, most people do not appreciate the priceless value of today's more effective medical care until they come face to face with a dread disease—like "Tom". And that's why, with a colorful new series of advertisements,* Parke-Davis is helping to give your patients a new and clearer understanding of what modern medical care can do for them—in terms of getting them well quicker, back on the job again, and even saving their lives.

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Now in eye-catching color in LIFE, TIME,
SATURDAY EVENING POST and TODAY'S HEALTH.

TIME LIFE TODAY'S HEALTH POST

53d ANNUAL CONGRESS ON MEDICAL EDUCATION AND LICENSURE

continued from page 232

"It is through the processes of science that meaning is attached to otherwise lifeless data," he said. "Science transforms the static into the dynamic . . . and adds the delightful intellectual savor of understanding. The joy of understanding is both the closest rival to the joy of service and its most effective partner."

Teaching of "basics" with interrelating of various subjects was also emphasized by Doctor Oliver Cope, associate professor of surgery at Harvard Medical School.

Three separate factors today "cry for revision of our present approach to medical education: the huge body of knowledge useful to medicine, the birth of a well-founded psychiatry, and the threatening hoard of obsolete modes of therapy," Doctor Cope said.

If the present line of curriculum extension should continue it could reach the "astonishing length of 18 years" of training by 1970, he said. No concerted effort has been made "to discriminate between those facts essential to medical education and those less likely to stand the test of time."

Group teaching, he said, offers a ready solution. Teachers from two to four departments joining in lectures, seminars and clinics, automatically limits the areas and facts being taught, while free discussion between faculty members in front of the students "opens less worthwhile material to criticism."

At present there are too many departments, he said. For instance, physiology, pharmacology and biochemistry are all teaching aspects of the same subject. It could be effective if they were joined as a division of physiologic chemistry.

These methods could afford a prompt means of pruning the facts taught, of weaving psychiatry into other branches, and of ridding the curriculum of obsolete therapies, he concluded.

In the graduate field, one of the major changes has been the incorporation of the medical school within a university, according to E. Hugh Luckey, dean of Cornell University Medical College.

While this has resulted in some difficulties, the university's influence on research and teaching methods has greatly advanced the state of the nation's health, he said.

" . . . the four years of medical school should constitute an experience that is the best possible preparation for all types of professional careers in medicine," he said. "This experience should prepare the physician for any kind of professional career; it should not be directed primarily toward training for any particular type of practice."

RHODE ISLAND MEDICAL JOURNAL

Since it is impossible for the medical student to learn all the things he will need to know in practice, medical school education "must necessarily be centered around the acquisition of a reasonable and balanced portion of the available knowledge" and must also develop "the ability to come to adequate conclusions from inadequate evidence," he said.

Graduate Training for General Practice

When graduate training is aimed toward general practice, it must meet certain principles, Doctor William Hildebrand, Menasha, Wisconsin, former president of the American Academy of General Practice, said. Among them: 1. the first year should be a well-rounded rotating internship; 2. general residency should be a minimum of two years with an optional third for specialization; 3. residency must be flexible with choice of service; 4. the first year of residency should cover all general fields but emphasize medicine, pediatrics, psychiatry; 5. the second year should include experience to allow the generalist to handle average traumatic problems; 6. obstetrical training should insure that the physician can handle normal obstetrics and give him the ability to recognize and handle major emergencies and complications; 7. the third or elective year should be available for further clinical training in the particular field of choice; 8. bedside instruction should be supplemented by conferences, seminars, audio-visual aids, laboratory facilities — both pathological and clinical, an adequate library, pathological tissues and case records; 9. outpatient or home service should be available for experience in managing ambulatory patients; 10. the director of the resident program should be selected with care and given full responsibility for planning and administering; 11. faculty and clinical staff should be of unquestioned ability and experience; 12. general residents must not be considered inferior but given the same dignity and prestige as residents in any other field.

Physicians looking at graduate training for general practice from the standpoint of the various specialties agreed in general that this training cannot be expected to give the physician knowledge he can only get in practice. "We cannot teach experience," one speaker said.

Generally their remarks agreed with that made by Doctor Lawrence M. Randall, Mayo Clinic obstetrician, who said schools should give the physician "basic experience to enable him to evaluate the patient so he has a broad perspective of the problems and is able to select treatment, some of which he may give but in addition be able to recognize treatment that others should administer."

In psychiatry, this means sufficient knowledge and background to make a differential diagnosis

continued on page 238



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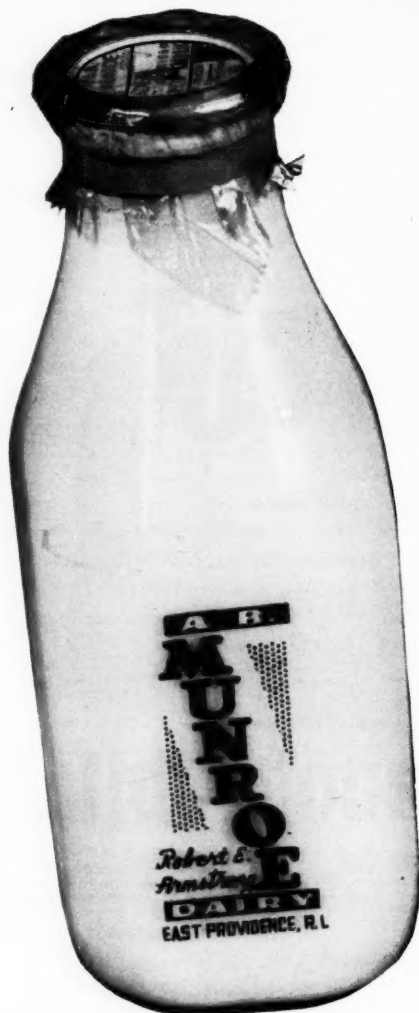
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**53d ANNUAL CONGRESS ON
MEDICAL EDUCATION AND LICENSURE**

continued from page 236

in view of the dual role of this field — personality function and psychophysiology, according to Doctor M. Ralph Kaufman, Columbia University College of Physicians and Surgeons and chief of psychiatry at Mount Sinai Hospital.

He also suggested that psychiatric teaching staff members should spend most of their time with other members of the faculty rather than with students, since "psychiatry must be demonstrated by every teacher of basic science and every clinician . . . and in terms of patients seen on their own wards rather than those selected patients on psychiatric service."

Postgraduate Education Lifelong Process

Before postgraduate medical education can "become of age" a number of challenges must be met. Doctor William Sodeman of the University of Missouri School of Medicine, Columbia, said.

Keynoting the session on this topic, Doctor Sodeman said that continuing education for the practicing physician has not yet reached the level of undergraduate and graduate training, mainly because its problems and programs have not been clearly defined.

One of the major problems is the varied needs and interests of the practicing physician, he said.

"In undergraduate and graduate education the student groups involved are fairly uniformly graded and the programs are generally full time. In the postgraduate field these features, which lead to a relatively easily planned program, do not exist. Each man's problems, needs, opportunities, time, stimulus, background of experience, and training vary widely," he said.

Doctor Victor Johnson, vice chairman of the Council and a physician at the Mayo Foundation for Education and Research, agreed that postgraduate education as a lifelong process must be equal in quality to undergraduate education. He noted that the Council has become more concerned with this problem since World War II and is beginning to offer suggestions and recommendations.

Several examples of postgraduate education through different techniques were given by speakers connected with such programs. One of these, the regional hospital — medical school affiliated program, offers the practicing physician an "unequaled 'do-it-yourself' potential," according to Doctor Harry A. Towsley, University of Michigan Medical School.

Doctor Towsley, who coordinates the Michigan postgraduate program, said the best place for a physician to continue his education is within his

continued on page 240

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53d ANNUAL CONGRESS ON MEDICAL EDUCATION AND LICENSURE

continued from page 238

own hospital. This is true, however, "only as long as he maintains an open, inquiring, critical mind and a keen interest in the progress of the science of medicine."


Doctor Towsley said the major feature of the Michigan program is the cooperation of the practicing physician in the regional hospital training courses supervised by the medical school. Through teaching of undergraduate and graduate students,

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—Swift

"Thou art the king"
—Shakespeare

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the physician himself has an opportunity for educational stimulation.

"This opportunity is greatly enhanced if his hospital is charged with the responsibility of providing a satisfactory training experience for interns or medical students, particularly if that obligation is discharged with pride in the product of its efforts," he said.

The Kansas program, described by Doctor Mahlon H. Delp of the University of Kansas School of Medicine, is the prototype of postgraduate education involving a medical school and a state society. The chief responsibility is in the University and its department of postgraduate medical education of the School of Medicine. The University's recognition of this department's prime responsibility was a major step, but most important has been the cooperation and association of the state medical society — "the program's student body," he said.

Constant participation of basic science along with clinical teachers in teams both on "circuit" and "short course" programs has done much to eliminate "the schism between basic scientists and practicing physicians," he noted.

Outlining the experiment at the Hunterdon Medical Center, Flemington, New Jersey, was Doctor Edmund Pellegrino, its medical director. The hospital was planned to provide "a broad spectrum of medical services to a rural community at a level of quality equivalent to that practiced in the university medical center," he said.

Its most important aspect — both for the patient and for the education of the practicing physician — has been the close cooperative effort of general practitioners and specialists. Especially valuable is the avoidance of isolating the general practitioner from the medical community, bringing him into close daily contact with a staff of full-time specialists, he said.

Examination Institute Held

Prior to the opening of the Congress itself, the Federation of State Medical Boards of the United States held its first Examination Institute, covering obstetrics and gynecology.

The purpose of the institute — which is expected to be held periodically, covering a different field each time — is to bring licensing board members together to compare notes and to work toward equalizing licensure among the states.

"Our schools are so well standardized that any graduate of an American or Canadian medical school is sufficiently educated to practice medicine in any state," according to Doctor Joseph J. Combs, Raleigh, North Carolina, president of the Federation.

concluded on page 243

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DISTRICT MEDICAL SOCIETY MEETINGS

PROVIDENCE MEDICAL ASSOCIATION

A meeting of the Providence Medical Association held jointly with the Rhode Island Heart Association was held at the Medical Library on Monday, March 4, 1957. The meeting was called to order by the president, Doctor Thomas L. Greason, at 8:30 P.M.

A motion was made, seconded, and passed that the reading of the minutes of the previous meeting of the Association be omitted.

Report of the Secretary

The Secretary reported as follows: The Executive Committee has approved of the plans of the Committee on entertainment for the Annual Dinner and Golf Tournament of the Association to be held at the Rhode Island Country Club on Wednesday, June 12, 1957.

The Golf Tournament will be sponsored this year by the Charles Pfizer Company.

Complete details regarding this annual event will be sent to the membership by the Entertainment Committee at a later date.

Announcements by the President

The president made the following announcements: that the Obituary Committee of Doctors Walter C. Gordon and Frank Jadosz has prepared the Association's tribute to the late Doctor Edmund D. Chesebro which has been placed on permanent file.

That he had named a committee consisting of Doctors Louis I. Kramer and Banice Feinberg to prepare the Association's tribute to the late Doctor Perry Bernstein.

Election of New Members

The secretary reported that the Executive Committee recommends for election to active membership the following: J. Wallace Conklin, M.D.; Mario Nicotra, M.D.; Wilson Utter, M.D.; Giovannini Petrocelli, M.D.; Harry Sprung, M.D.; and Edmund Billings, M.D. (Associate membership).

A motion was made, seconded and passed that

these physicians be elected to membership in the Association.

Scientific Program

Doctor Greason introduced Doctor Banice Feinberg, president of the Rhode Island Heart Association, and announced that he would preside for the presentation of the guest speakers.

Doctor Feinberg expressed the appreciation of the Rhode Island Heart Association to the Providence Medical Association for the joint meeting and he then introduced as the first speaker Doctor Henry P. Goldberg, assistant professor of clinical pediatrics at Cornell University Medical College, and assistant attending pediatrician at the New York Hospital, who spoke on, *Clinical and Laboratory Diagnosis of Congenital Heart Disease*.

Doctor Goldberg talked about the most common types of congenital heart disease and showed excellent slides to assist in the presentation of his subject. The diagnosis, treatment and complications of coarctation of the aorta was discussed first. He indicated that at present the best age for an operation on this defect is between five and ten years.

He discussed in a similar manner, patent ductus arteriosus, auricular septal defect, ventricular septal defect and pulmonic valvular stenosis.

Doctor Goldberg emphasized the extreme importance of the history, physical finding and quality of the heart sounds in the diagnosis of congenital heart disease.

The usual laboratory studies such as the chest X rays, the fluoroscopic examination and the electrocardiogram, he said, were absolutely necessary in the proper evaluation of any given problem in congenital heart disease. More complete studies such as cardiac catheterization, pressure measurements and arterial saturation may be necessary in certain cases and especially if surgery is contemplated.

Arterial saturation, he pointed out, was very important in the diagnosis of certain cardiac shunts.

The second speaker was Doctor Israel Steinberg, M.D., assistant professor of clinical medicine and associate professor of clinical radiology, Cornell

APRIL, 1957

243

Medical College; assistant physician and radiologist, the New York Hospital, who spoke on, *Angiocardiography in the Diagnosis of Cardiopulmonary Disease*.

Doctor Steinberg stressed the importance of angiography in the diagnosis of certain cardiovascular and pulmonary diseases. He had beautiful lantern slides to illustrate the various defects which he discussed.

Adjournment

The meeting adjourned at 10:50 P.M.

Attendance was 126.

Collation was served.

Respectfully submitted,

MICHAEL DiMAIO, M.D., *Secretary*

53d ANNUAL CONGRESS ON MEDICAL EDUCATION AND LICENSURE

concluded from page 240

He said the Federation now is concerned with the question of "fitness," of a man's ability to apply the knowledge gained in medical training.

Many state licensing boards already are directing their examinations toward fitness rather than concentrating on factual education, but the Federation hopes to make this more uniform, so that "any man licensed in one state can be licensed in any other."

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THROUGH . . .

*the Microscope*

Naturopaths Exposed in Florida

Twelve years ago the RHODE ISLAND MEDICAL JOURNAL published an outstanding exposé of naturopathy which included information on a Florida located "school" whose largest asset was its sign proclaiming it to be a Naturopathic University.

Now we read with interest that the present Governor of the state of Florida has recently released a report, based on an investigation begun last September, recommending that the Florida legislature "abolish the practice of naturopathy." The report cites that "none of the so-called schools had even one adequately trained teacher on the faculty, for there is no naturopathic school where they could be adequately trained; none has one worthily-equipped laboratory; none conducted a clinic in which a wide variety of diseases could be studied; none had any affiliation with a worthy hospital, and none existed where any internship, externship or preceptorship is required."

All of which is most interesting. And all of which in substance could be read in our Journal back in 1945!

Doctor Draft Law Proposed for 1957

According to the Washington Office of the A.M.A. the Defense Department is moving ahead with legislation to amend the regular draft act so that physicians may be called up selectively. The special doctor draft act expires next June 30.

The proposed amendment would in effect waive the Selective Service Act's prohibition against discrimination to the extent that physicians, dentists and allied scientists could be called up by their professional classification. Thus these men, because they are in the particular professional groups, would be subject to special calls and not necessarily inducted in the same order as others in their same age group.

Voluntary Pensions for Self-Employed

The American Medical Association and six other national organizations have banded together into a

nationwide organization to promote legislation in Congress of the establishment of voluntary pension plans for the self-employed. Name of the new organization is American Thrift Assembly for Ten Million Self-Employed. The objective is passage of legislation to authorize deferment of income tax on a portion of income if put into a retirement or annuity program, with tax to be paid as the money is received back in the form of retirement benefits. Under present law, corporations need not pay taxes on money put into retirement plans for their employees, but the self-employed are denied this advantage.

Joining with the A.M.A. in this new campaign are the American Bar Association, American Institute of Accountants, American Retail Federation, National Association of Retail Druggists, American Dental Association, and the National Association of Real Estate Boards.

One Out of Every Four —

In a recent special report the Washington Office of the American Medical Association presented some interesting statistics regarding federal health programs and medical legislation. Some of the greatest activity in the health field in recent years has involved laws and amendments to laws that widen the scope of medical care for federal beneficiaries. The recent Dependents Medical Care Act is a shining example. Today nearly one out of every four persons, including over 22 million veterans, is eligible to receive at no cost to them some degree of medical care from the Federal Government.

Here are some figures worth pondering over:

22,599,000 living veterans as of January 1, 1957
5,200,000 military personnel and their dependents
300,000 beneficiaries of the Public Health Service, including 200,000 seamen, but excluding beneficiaries of Federal Employees' Compensation Act and Indians.

5,100,000 public assistance recipients

370,000 Indians and Alaskan natives receiving care in 56 federal hospitals or in private facilities

ties under contract
4,000,000 beneficiaries of the Federal Bureau of
Employees' Compensation Act (at-work in-
juries only)

New A.M.A. Exhibits at N. Y. Meeting

Two new A.M.A. scientific exhibits designed primarily for physicians will be unveiled at the Annual Meeting in June in New York City. Prepared jointly by the Bureau of Exhibits, the Bureau of Health Education, and the Council on Foods and Nutrition they are:

(1) *Health Appraisal of the School Child* which presents five factors involved in a complete appraisal program, including teacher observation, screening procedures, dental and medical examinations, and the follow-through.

(2) *Foods in Oral Electrolyte Therapy* which is designed primarily for the general practitioner who is concerned with electrolyte therapy in the non-hospitalized patient. Purpose of the display is to remind physicians that foods are useful in electrolyte replacement. The exhibit is divided into three major categories: (a) common clinical conditions causing deviation from the normal; (b) examples of foods useful for replacement therapy, and (c) advantages of oral administration of these elements.

Voluntary Way Proves to be Best

Hospital and medical care payments, to help cover the cost of treatment and physicians' services, amounted to \$2.1 billion in 1956, the Health Insurance Institute reported recently. This figure, the Institute stated, includes replacement of income lost through sickness or disability. A survey conducted among the country's insurance companies revealed that reimbursements through group insurance plans in force during the year totaled 1.5 billion dollars, or 20.9% over 1955, while payments through individual policies totaled 601 million dollars, a gain of 12.8%, for an over-all increase of 18.5% in benefit payments over 1955.

A further breakdown of the payments made for services covered by major medical expense insurance is as follows:

Hospital expense	\$31,641,000
Surgical expense	18,483,000
Medical expense	7,694,000
Nurse	4,185,000
Drugs	1,214,000
Other	1,214,000

In concluding its report of payment for health care by the insurance companies throughout the United States, the Institute stated that the increase in such payments reflects the continued efforts of the public to pay its doctor and hospital bills through the voluntary non-governmental mechanism.

concluded on page 251

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BOOK REVIEWS

CLINICAL EXAMINATIONS IN NEUROLOGY by Members of the Sections of Neurology and Section of Physiology, Mayo Clinic, Rochester-Minnesota — 1956 — W. B. Saunders Co. \$7.50

Although there is no lack of books on the neurological examination, another is always welcome, especially when it comes from and describes the methods of examination employed at the Mayo Clinic. This book represents an attempt to convey to two men, Henry Woltman and Frederick Moersch, the gratitude of sixteen students who were apprenticed to them. The authors offer their volume as a factual outline of the practical components of the neurological examination; they intend it to serve as a series of blueprints for practice, not as a course of lectures delivered from a remote podium. They write interestingly about the tools to be used by the neurologists and the manner of using them. In a word, they describe the techniques employed at the Mayo Clinic, to the end that their book may serve as a *vade mecum* for the Fellows of the Mayo Foundation in acquiring mastery of the neurologic examination.

The book contains seventeen chapters and runs to three hundred forty-five pages. Among the subjects discussed are the neurologic history, the cranial nerves, the motor functions, the reflexes, the sensory examination, the mental functions, language and motor speech, autonomic functions, the problem of pain, electro-encephalography, electro-myography, bio-chemical and pharmacologic aids in neurologic diagnosis, the cerebro-spinal fluid and neuro-ophthalmology. Where there is so much that is excellent it is difficult to select anything for special mention; but the chapter on neuro-ophthalmology, by reason of its completeness, would have pleased Hughlings Jackson who insistently taught the necessity of ophthalmological knowledge by saying that "there are twelve cranial nerves and six of them are concerned with the visual apparatus." This, and the other chapters, especially that on muscles, are supplied with illustrations which really illustrate and helpfully complement the text. As the authors rightfully claim, mastery of the clinical neurologic examination is a necessary acquisition which can be learned only by doing, but

guidance can accelerate the process. For those who may desire such guidance this book can be confidently recommended as a lucid, comprehensive exposition of the neurologic examination.

JOHN E. DONLEY, M.D.

THE PHYSICIAN-WRITER'S BOOK — Tricks of the Trade of Medical Writing by Richard M. Hewitt, W. B. Saunders Co., Phil., 1957. \$9.00.

This valuable technical book, with an inviting title, by a professor of medical literature at the Mayo Foundation, will be especially useful to editors who are concerned with emending and rearranging papers which have been accepted for publication. It also renders equally good service, naturally, to writers on medical subjects. If it comes into the hands of the occasional writer, however, he may be discouraged from writing because of the exhaustive treatment of the subject. It is the prolific writer who should profit most from the reading of this book.

In a new edition, perhaps, the chapter on words of foreign origin might be enlarged. While imperfect English may pass unnoticed by the European reader, incorrect Greek and Latin terms will be quickly detected. Then, too, the misspelling of foreign words can be very annoying, no matter what the nationality of the reader is. Ignorance of Latin, Greek, and modern foreign languages does not excuse medical writers, proof-correctors, or publishers. This book should be of great service in this respect, as well as in many others.

F. RONCHESE, M.D.

ORGANIZED HOME MEDICAL CARE IN NEW YORK CITY. A Study of Nineteen Programs by the Hospital Council of Greater New York. Published for the Commonwealth Fund by Harvard University Press, Cambridge, Mass. 1956 — \$8.00

This 500-page report examines in detail the home medical care for indigent and medically indigent patients which has been provided in New York City for a number of years.

Sixteen of the programs studied are operated by the New York City Department of Hospitals. Two

continued on page 248

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BOOK REVIEWS

continued from page 246

are operated by voluntary hospitals, New York Hospital Cornell Medical Center, and Montefiore Hospital, and one by the New York City Department of Welfare. In March, 1954, there were 2,059 patients carried on the various programs.

The 530 home care patients studied in the sample were primarily elderly and 63% were women. Almost all had been wage earners until forced to retire by the illness for which they were receiving treatment. Heart disease was the most frequent diagnosis, other diagnoses found most frequently were diabetes mellitus, disorders of the central nervous system, malignant neoplasms and various forms of chronic arthritis.

The program of the Department of Hospitals limited eligibility almost entirely to patients who were on or had recently been discharged from hospital wards. Instances of referrals of medically indigent patients who had formerly been private patients were reported from both of the voluntary hospital programs, "raising the question of the extent to which chronic illness is a cause of indigence."

More than 90% of the 530 patients interviewed expressed a strong preference for home care rather than hospitalization, and their families had a similar preference. The most important reasons given by the patients were: being with family, friends and children, greater sense of personal dignity and freedom, dislike of some aspects of hospital care, greater opportunities for recreation at home. About three quarters of the patients interviewed felt that the physician who visited them at home took a more personal interest in them.

EXCERPTA MEDICA

The scientific study of material objects is relatively easy. It is fascinating to the human mind because here we can isolate problems and work them out neatly. Thus sciences such as chemistry, physics, metallurgy, astronomy, and mechanics have made great progress. The science of living beings, and especially of man, is much more difficult. In analysing ourselves we are obliged to use many techniques and several sciences. Naturally all these sciences arrive at a different conception of their common object. Anatomy, biochemistry, psychology, history, sociology, political economy, and the rest, added together still leave man the almost unknown. He is at the same time the corpse dissected by the anatomist, the consciousness observed by the psychologist, the amazing community of cells and fluids studied by the physiologist. He is the economic man. He is also the poet, the hero, and the saint. Immense regions of our inner world are still unknown. The science of man is the most difficult of all the sciences, and medicine will have great contributions to make thereto if as doctors, we take off our blinkers and study MAN and not merely his diseases.

MAN, the UNKNOWN

ALEXIS CARREL

RHODE ISLAND MEDICAL JOURNAL

In each of the programs operated by voluntary hospitals, responsibility for both administrative and clinical leadership was vested in one physician certified by the American Board of Internal Medicine. In the municipal hospital programs and the Welfare Department, the administrative and clinical supervision responsibilities were divided between a medical director and part-time assistants. Case loads were below 50 in the two voluntary hospitals and above 100 in some of the municipal programs.

Except in the Cornell program, education of medical students was not a prominent feature of the plans. The report indicates that home medical care plans have not yet been utilized to the fullest possible extent in the undergraduate education of students of medicine, nursing, and social work and with the exception of the Cornell program there is little effort on a postgraduate level to provide a desirable educational experience for medical residents through home medical care plans.

The physician, social worker, and a nurse coordinator with public health nursing training and experience, are referred to as the basic professional team in any home care program. It is also considered desirable to have physical and occupational therapists on the team and to arrange for the provision of housekeeping and home-making services.

It is recommended that a medical evaluation of the patient be made by the clinic director, the estimate of nursing needs by the nursing coordinator and the physical suitability and adequacy of the patient's home by the social worker.

Laboratory services and special appliances such as wheel chairs, crutches and hospital beds are frequently needed and should be provided.

Nursing care in the home is usually provided by staff members of Visiting Nurse Agencies in the community who work with the members of the Home Care team in carrying out the physicians' orders for nursing care and treatments.

The report states that home care is not, and cannot be, a substitute for hospital care in every situation. Rather it should be considered as representing a significant improvement in the continuity and comprehensiveness of the medical care provided for certain patients with long-term illnesses for whom hospitalization is not actually necessary — patients who, with a certain amount of supervision, would do as well, if not better, in their homes.

However (the report states), a properly utilized home care program may bring about as a secondary effect, some decrease in hospital bed occupancy. A definite saving in hospital bed utilization is estimated to be equal, in hospital days, to approximately one fourth of the total number of home care days provided.

In its summary, the Study Committee hopes that the recommendations and suggestions in the report

continued on page 250

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The amino acids supplied by meat protein function in many vital ways in addition to their well-known role in the growth and maintenance of tissues. They participate in the body economy as precursors of hormones, vitamins, enzymes, and other physiologic agents.*

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Top quality protein, as supplied by meat, yields important amino acids for participation in these and other important functions. The excellent balance of available amino acids is an outstanding feature of meat protein.

*Geiger, E.: Digestion, Absorption and Metabolism of Protein, in Wohl, M. G., and Goodhart, R. S.: Modern Nutrition in Health and Disease, Philadelphia, Lea & Febiger, 1955, pp. 98-143.

The nutritional statements made in this advertisement have been reviewed by the Council on Foods and Nutrition of the American Medical Association and found consistent with current authoritative medical opinion.

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BOOK REVIEWS

continued from page 248

may be helpful to other communities in determining whether or not, and to what extent, home medical care is feasible in their particular situation.

NELLIE R. DILLON, R.N.

*Director, Providence District
Nursing Association*

PERIPHERAL CIRCULATION IN MAN.

A Ciba Foundation Symposium. Editors for the Ciba Foundation — G.E.W. Wolstenholme, and Jessie S. Freeman, assisted by Joan Etherington. Little, Brown & Company, Bost., 1954. \$6.00

This book is a collection of all papers given at the Twenty-First Symposium of the Ciba Foundation. It has undergone a minimum of editing and includes interesting discussions dealing with fundamental and poorly understood problems in the field of peripheral circulation in man.

The Ciba Foundation is an educational and scientific charity founded by a trust deed in London in 1947. It receives its financial support from the world-wide pharmaceutical firm which has its headquarters in Basle, Switzerland.

The great majority of papers given are concerned with basic physiological research problems. When answered and coupled with further knowledge they will have marked influence of the treatment of many vascular diseases. Subject matter covered by the book includes methods of studying blood flow, the changes in circulation due to exposure to heat or cold, the neurohistology and reflex control of the circulation and the effects of sympathectomy.

Research in human physiology has always been difficult in contrast to physiological research on isolated pieces of tissue. The need for strict control of the environment, the lack of ready availability of subjects, length of experiments and the difficulty in controlling the conscious subject are a few of the problems. Methods of overcoming some of these difficulties are to be found in reading the various papers.

The use of venous occlusion plethysmographic technique is described and referred to in several of the papers dealing with measurement of blood flow. Although this method is not generally used clinically, familiarity with it would seem to be of value since it has promise in the future, possibly in a modified or simplified form.

The lack of correlation between sudomotor and vasomotor responses to lumbar sympathectomy has been observed for some time. In one paper possible explanations are given based on physiological research data.

The book, while not of great clinical value, is a compilation of papers by leading authorities on an aspect of medicine about which much must be learned. For those interested in fundamental research problems this book would be of great interest and value.

J. ROBERT BOWEN, M.D.

THE OFFICIAL AMERICAN MEDICAL ASSOCIATION BOOK OF HEALTH.

Edited by W. W. Bauer, M.D. Dell Publishing Company, Inc., N.Y., 1956.

This book is a paperbound first edition compilation of articles from *Today's Health*. It consists of fifty-seven articles on as many subjects, written for the layman, and of little but general interest to the physician.

It might be recommended by physicians to patients who ask for the name of a nonspecific booklet on general health matters.

A. LLOYD LAGERQUIST, M.D.

THROUGH THE MICROSCOPE

concluded from page 245

Medical Books for Korea

The American-Korean Foundation and the United States Army Medical Service have announced the discontinuation of their joint project of shipping medical books contributed by individual physicians, medical schools, hospitals and state and local medical societies to Korea.

Books should not be sent to the Sharpe General Depot in California as in the past, for facilities no longer exist for packing and trans-shipping to Korea.

In making the announcement, Howard A. Rusk, M.D., President, American-Korean Foundation said, "the response of physicians and medical groups throughout the country for our appeal for books for Korean medical schools has been so generous that further contributions are not needed." As a result of this program, Doctor Rusk stated, over 77 tons, valued at \$76,000, of medical texts, references and periodicals have been shipped to Korea for distribution to Korean medical schools.

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June 12 — Wednesday

Golf Tournament and Dinner

Providence Medical Association

EFFECT OF CIGARETTE SMOKING ON EXCRETION OF UROPEPSIN

concluded from page 216

⁵Mirsky, I. A.; Futterman, P.; Kaplan, S., and Broh-Kahn, R. H.: Blood plasma pepsinogen. I. Source, properties and assays of proteolytic activity of plasma at acid reactions, *J. Lab. & Clin. Med.* 40:17, 1952

⁶Anson, M. D., and Mirsky, A. E.: The estimation of pepsin with hemoglobin, *J. Gen. Physiol.* 16:59, 1943

⁷Bucher, G. R.: Uropepsin: A review of the literature and report of some experimental findings, *Gastroenterology* 8:627, 1947

⁸Mirsky, I. A.; Block, S.; Osher, S., and Broh-Kahn, R. H.: Uropepsin excretion by man. I. The source, properties and assay of uropepsin, *J. Clin. Investigation* 27:818, 1948.

⁹Spiro, H. M.; Reifstein, R. W., and Gray, S. J.: The effect of adrenocorticotrophic hormone upon uropepsin excretion, *J. Lab. & Clin. Med.* 35:899, 1950

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INDEX OF ADVERTISERS — MAY

	PAGE
American Meat Institute.....	249
E. P. Anthony.....	247
Ayerst Laboratories	245
J. E. Brennan.....	247
Brewer & Company.....	208
Bristol Laboratories	(Insert) 204, 205
Burrell-Sullivan Shoe Company.....	200
Butterfield's Drug	243
Ciba Pharmaceutical Company.....	237
Coca-Cola Company	200
Curran & Burton	247
Davis & Davis	243
Roland A. Derosier Agency.....	251
Desitin Chemical Company.....	201
Foot-so-Port Shoe Company	198
Fuller Memorial Sanitarium.....	225
Charles B. Knox Gelatine Company, Inc.	209
Lakeside Laboratories	207
Lederle Laboratories	202, 203, 213, (Insert) 224, 225
Eli Lilly and Company.....	Front Cover
Medical Bureau	247
Munroe Dairy	238
Parke Davis & Company.....	Inside Front Cover, 197, 234, 235
Pfizer Laboratories	214, 239
Charles Pfizer Company.....	Third Cover
Physicians Service	210
R. I. State Employment Service.....	247
Rhode Island Hospital Trust Company.....	212
Sealy Mattress Company	204
G. D. Searle.....	204, 233
Smith, Kline & French Laboratories.....	Back Cover
E. R. Squibb & Sons.....	211
U. S. Vitamin Corporation.....	241
Johnnie Walker	250
Warwick Club Beverages.....	240
Richard K. Whipple	251
Winthrop Laboratories	199